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The new History of ideas research Centre was founded on the conviction that the history of ideas is of great importance not only for all academic fields, but first and foremost for culture and society. The history of ideas enables a better understanding of our present, whose culture and manners of thinking result from certain traditions and therefore are not self-explanatory. We are not Europeans neither because of the territory we inhabit nor in virtue of recently concluded European treaties, but because European culture has been shaped by particular basic ideas and attitudes. They can only be clearly comprehended and commented on via an examination of their history, which can only be explicitly appropriated and evaluated against their historical background. The history of ideas explains our mental and cultural presuppositions and thereby may lead to justified affirmation and critique – not only a critique of traditional ideas, but also a critique of our present situation that often reveals its deficiencies only in the light of prior convictions and keynotes. The increasing specialization of historical studies needs to be counterbalanced by other types of research that focus on common presuppositions and thoughts, and thereby promote interdisciplinary work. This is precisely the scope of the studies of the history of ideas, where many academic fields overlap. In order to foster fruitful research discussion in the domain of the history of ideas, the research centre decided to launch the online magazine *Orbis Idearum. European Journal of the History of Ideas*, and the book series *Vestigia Idearum Historica. Beiträge zur Ideengeschichte Europas* by mentis Verlag in Münster. The concept of the history of ideas has admittedly lost its semantic outlines. Since historical research has disproved rather than confirmed Lovejoy's research program that was based on the supposition of constant unit-ideas, the concept of the history of ideas can be applied to any inquiry in the field of the *Geistesgeschichte*.

By contrast, the new History of Ideas Research Centre attempts to restore the distinctive profile of the history of ideas. For the Centre, ideas are thoughts, representations and fantasy images that may be expressed in various forms. Ideas manifest themselves first and foremost in language, but also in nonlinguistic media, and even in activities, rites and practices. In the latter case, they do not always manifest themselves directly, but are sometimes at the basis of certain cultural phenomena before eventually receiving linguistic expression. For this reason, the history of ideas coincides neither with the history of concepts (*Begriffsgeschichte*) nor with intellectual history (*allgemeine Geistesgeschichte*). While the former is oriented towards thoughts that are expressed linguistically, and, therefore, elaborates only a part of the history of ideas, the latter is devoted to the whole mental life of humankind, which may involve even religious systems and fundamental convictions of a whole epoch. By contrast, the history of ideas always focuses on particular elements that are recognizable in thought or in culture, and whose transformation or constancy can be explored over a certain period of time by describing, analyzing, and interpreting their appearance, function, and effect. Taken in this sense, the history of ideas occupies an intermediate position: it covers a broader field than the history of concepts that could be understood as one of its subareas, but it has a more specific task than intellectual history (*allgemeine Geistesgeschichte*). Even more than in the case of the history of concepts (*Begriffsgeschichte*), one must resist the temptation to mistake the historian's interpretations for historical ideas.

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CONTRIBUTIONS
IN ENGLISH

THE CONCEPT OF EMERGENCE. A BRIEF HISTORY AND A PHILOSOPHICAL ANALYSIS OF AN ONTOLOGICAL REGULATIVE PRINCIPLE OF ORGANIZATION

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ABSTRACT

Emergence is it is a concept that should undergo more careful philosophical analysis. This paper aims to promote the idea that “emergence” should be taken as an ontological regulative principle (rather than a conceptual instrument able to provide a quick empirical answer to many concrete scientific problems). The usefulness of the proposed approach rests in the fact that it could work as an overarching theoretical framework for the ever-growing body of theories and empirical data provided by natural and social sciences; it could also help to overcome (at least partly) the extreme over-specialization that characterizes contemporary knowledge. Furthermore, it could work as a programmatic framework for comparing and combining data and theories belonging to very different fields – from the natural to the social sciences – but related to one single, very complicated entity, that is, Man. So, after a short history of the concept of emergence, an analysis of its ontological nature will follow; then some specific philosophical problems – like the metaphoric aspects of the emergentist approach, or the ontological unification of every kind of emergence – will be discussed. Afterward this paper will provide a few reasons for supporting a regulative approach to emergence and will illustrate its advantages – supplying an example/proposal taken from the debate about free will.

1. INTRODUCTION: EMERGENCE EVERYWHERE

There is a lot of talk about “emergence” going on these days; indeed, it seems that emergence is back, and that this venerable – although controversial – concept is joining other popular buzzwords, such as “system,” “complexity,” “non-summativity,” “wholeness,” and so forth. In fact, a lot has been written in recent years about the “re-emergence of emergence” (e.g., Clayton and Davies 2006, Bedau 2008).

The vocabulary produced by so-called “system science” has definitely become part of the established scientific background and academic curricu-

lum.

It is possible to find it everywhere, often connected with other philosophical concepts, like “existence.” One example of this is the Dutch theoretical physicist Erik Verlinde and his hypothesis of “Entropic Gravity,” according to which gravity is not a fundamental interaction, but probabilistically “emerges” from physical systems’ spontaneous tendency to increase their level of entropy (Verlinde 2010). Another example – taken from applied research – is systems biology, a collective name for a certain number of trends of contemporary biotechnology and biosciences (e.g., Alon 2006) strongly focused around the goal to discover and produce emergent properties in living systems. Philosopher Craig Callendar (Callendar 2010) writes in «Scientific American» that time and change are illusions, as they “emerge from a universe that, at root, is utterly static,” implicitly stating that emergence is the opposite of existence – that is, if something emerges, this means that it does not properly exist – and so endorsing a form of “mereological nihilism.” And these are just three examples out of many.

The notion of “emergence” is getting trendy, so it should undergo a more careful philosophical analysis. After a short history of the concept of “emergence,” this paper will analyze the proposal that this concept should be taken as an ontological regulative principle of organization (rather than a conceptual instrument able to provide a quick empirical answer to many scientific problems). The usefulness of the proposed approach will be then illustrated (which rests in the fact that it could work as an overarching theoretical framework for the ever-growing body of theories and empirical data produced by natural and social sciences, and could also help to overcome, at least partly, the extreme over-specialization that characterizes contemporary knowledge). And as one of the central debates about human nature, that is, free will, has arguably reached a “theoretical stalemate,” an emergentistic program to set this discussion in motion again will be proposed.

2. BRIEF HISTORY OF A CONTROVERSIAL CONCEPT

In his book *Emergent Evolution: Qualitative Novelty and the Levels of Reality*, historian and philosopher of science David Blitz writes that the term “emergent” was used for the first time by George Henry Lewes (Blitz 1992). Lewes compares and opposes, in his *Problems of Life and Mind* (1874-1879), two words, “resultant” and “emergent”: the latter indicates an unpredictable trait or effect, which cannot be explained through the mere sum of its components. Lewes was following the idea – coined by John Stuart Mill – of “qualitative novelty,” as in the example given by Mill about the properties of water, which cannot be reduced to those of hydrogen and oxygen. In fact,

the first thinker to talk about emerging qualities was Aristotle, who in his *Metaphysics* characterized composite entities as “having a number of parts where the totality is not a heap but the whole is something besides the parts” (Book H, 1045:10). During the Twenties, emergence and emergentism found several followers, like Samuel Alexander, Roy Wood Sellars, Arthur Lovejoy, the South-African politician Jan Smuts (father of another important systemic concept, “holism”), Charlie Dunbar Broad, and Conwy Lloyd Morgan. The latter published three works on this topic: *Emergent Evolution* (1923), *Life, Spirit and Mind* (1926), and *The Emergence of Novelty* (1933).

In spite of their differences, all these thinkers and theorists have common ground, namely, the idea that the world is built like a ladder, composed of well identifiable strata, paralleled by an analogous stratification of the natural and social sciences. Of course, the fundamental level is the physical one, followed by the chemical, the biological, the psychological, and the social. And of course the disposition of layers follows criteria of growing organisational complexity.

From many points of view emergentism is a monist substitute for an obsolete approach, vitalism, but actually emergentism had, from the beginning, a broader focus: while vitalism regarded only living systems, emergentism aimed to include in its theoretical web the whole of reality. But how did the first emergentists define “emergence”?

Lloyd Morgan said that “Under what I call emergent evolution stress is laid on this incoming of the new. Salient examples are afforded in the advent of life, in the advent of mind, and in the advent of reflective thought” (Lloyd Morgan 1923). Interestingly, Lloyd Morgan’s view was not a real scientific theory, but a philosophical one, as it did not introduce specific, concrete causal mechanisms able to explain the phenomenon of emerging properties (Blitz 1992).

In the landmark work *The Mind and Its Place in Nature* (1925), Broad added a concept strongly tied with the idea of emergence, namely the idea of “level,” and introduced a fundamental distinction between “intra-ordinal laws,” referring to events and objects belonging to a specific level or order, and “trans-ordinal laws,” related to the development of higher-level properties from lower-level ones.

In the Thirties an emergentist multi-level view of life was advanced by embryologist Joseph Needham (Needham 1937), and in 1940s by Julian Huxley (Huxley and Huxley 1947) and by biologist Alex Novikoff in a well known article published in «*Science*», *The Concept of Integrative Levels in Biology* (Novikoff 1945).

During the Fifties, Ludwig von Bertalanffy, an Austrian biologist and philosopher already famous for his works on theoretical biology, inspired the rise of “General Systems Theory,” a conceptual umbrella and a movement

which led to the foundation – in 1956 – of the Society for General Systems Research. The meta-scientific and philosophical nature of Bertalanffy's approach is clearly illustrated by his goal to unify all sciences and to provide them with a conceptual framework capable of being for contemporary sciences what Aristotle's logic was for ancient ones. Ambitious as it was, his program of a unification of all sciences was destined to stay programmatic, that is, not to be concretized in any real scientific breakthrough (Bertalanffy 1968).

Anyway, the Society for General Systems Research offered, through its annual publications («General Systems»), the opportunity to work on systemic and emergentist themes to many researchers, such as Anatol Rapoport, Kenneth Boulding, Ralph Gerard, Heinz von Foerster, Russell Ackoff, Donald T. Campbell, Herbert Simon, George Klir, Paul Weiss, James G. Miller and several others.

Among the several other scholars involved with the concepts of emergence and system, we cannot omit Herman Haken – father of “synergetics” – and Ilya Prigogine, with his seminal work on non-equilibrium thermodynamics and open systems – which he called “dissipative structures” (see, e.g., Haken 1977, Prigogine 1980, Nicolis and Prigogine 1977).

Of course, during these decades, emergentism and systemic philosophy did not lack critics, from Bertrand Russell (1927) – who considered emergent qualities merely epiphenomena without scientific significance – to Ernest Nagel (1961) and Carl G. Hempel (1965), who refused to attribute to “emergence” any ontological status, as in their opinion this concept was too imprecise. According to them, emergence was admissible only as an epistemological label, roughly translatable with the expression “so far unexplainable.”

3. ONTOLOGY, RATHER THAN EPISTEMOLOGY

Definitions of emergence vary. Lewes writes: “The emergent is unlike its components insofar as these are incommensurable, and it cannot be reduced to their sum or their difference” (Lewes 1875). Jeffrey Goldstein more formally defines emergence as: “the arising of novel and coherent structures, patterns and properties during the process of self-organization in complex systems” (Goldstein 1999). Biologist Peter Corning specifies that systemic laws are merely descriptions or patterns, and so they do not actually “generate” anything and cannot be considered as underlying causal agencies (Corning 2002).

Most researchers and philosophers talk about two different kinds of emergence, namely a “strong emergence” and a “weak emergence.” For in-

stance David Chalmers says that

a high-level phenomenon is strongly emergent with respect to a low-level domain when the high-level phenomenon arises from the low-level domain, but truths concerning that phenomenon are not deducible even in principle from truths in the low-level domain. We can say that a high-level phenomenon is weakly emergent with respect to a low-level domain when the high-level phenomenon arises from the low-level domain, but truths concerning that phenomenon are unexpected given the principles governing the low-level domain (Chalmers 2002).

According to this philosopher in the whole universe there is only one single strongly emergent phenomenon, namely, human consciousness. The definition given by Chalmers is quite clear, even clear-cut: there are two kinds of emergence that can coexist. I have to disagree with Chalmers: his take on emergence – based on the idea of its “uniqueness” – sounds like a kind of miracle and has an anthropocentric slant which looks incompatible with the scientific understanding of the world. Conjecturing a multi-layered ladder of emerging levels makes more sense and sounds philosophically more acceptable. Similarly, Mark A. Bedau raises doubts about strong emergence more broadly, stating that “although (...) logically possible, it is uncomfortably like magic” and that its “mysteriousness will only heighten the traditional worry that emergence entails illegitimately getting something from nothing” (Bedau 1997).

So, who is right? Is emergence only an epistemological, or subjective phenomenon, expressing our (perhaps temporary) ignorance about the facts of the world, or is it an ontological, or objective one? The short answer is: no one can know. Let us consider the long answer. On the epistemological side, it is in fact possible to view “emergence” as an obstacle on the path toward the explanation of a certain phenomenon. I do think it is impossible to say for certain that a certain entity or process is emergent in a strong sense, and this just because one day a reductionist explanation could be found. On the ontological side, it is possible to say (as many philosophers have noticed) that the reductionist program is, well, just a program. In other words, reductionism rests on the faith that one day everything will be reduced to some, so far unknown, elementary entities. When and if this will happen, concepts of emergence and existence will be put on opposite sides, that is, emergence will mean the contrary of existence, and every emerging object or process will not exist in a proper sense.

In the meantime, while waiting for a general reduction of everything to the simplest entities imaginable, and just to keep natural and social sciences active, I believe it is more useful to start with the hypothesis that the objects

they are about do really exist. And so, we should hypothesize that biological organisms do really exist, that human beings do really exist, that even society exists (the latter does not mean to endorse or to thwart any project of building a social ontology like Searle's, a topic too large to be faced here). There is a strong reason for this pragmatic choice: in fact, no one can say what the ultimate, elementary entities, the building blocks of our world, are. So far physical science talks about elementary particles, and sometimes about strings; one day, some new entity – closer to the “bottom” of reality than particles or strings – could appear. Consequently, any coherent hard-line reductionist approach implicitly calls for a suspension of every judgment about existence beyond this unknown, ultimate level of reality.

4. WHY EMERGENCE SHOULD NOT BE TAKEN AS A STRONG THEORY OF EVERYTHING

The ambition to build an “emergentist theory of everything,” or a “general theory of emergence,” should be carefully avoided. The reasons to follow this precept are basically two: the need not to fall into what I would like to call “systemic hype,” which I think is (from a theoretical point of view) hazardous and rather naïve; and a certain number of de facto limitations, which cannot be bypassed anytime soon.

According to many supporters of the “theory of complexity,” complex systems emerge because of simple principles of self-organization, and these rules are applicable everywhere, from living beings to human cognition, from atmospheric weather to the ebbs and flows of the stock market. In fact, everything can be explained with a definitive, unifying, grand self-organizing algorithm, which could be around the corner. Does it sound reductive, even reductionist? Of course it does, because, to a certain extent, it is. But this is exactly the approach embodied during the Eighties by one of the main centres working on the theory of complexity, the Santa Fe Institute. Research carried out at this institute since the mid-Eighties by diverse scholars (such as Murray Gell-Mann, Doyne Farmer, Stuart Kauffman, John Casti, Jim Crutchfield and John Holland) brought a lot of theoretical work, many popular books and, to tell the truth, a certain degree of opacity and confusion to the concept of emergence. For instance, Kauffman talks about a brand-new “fourth law of thermodynamics,” an immanent organizing principle of the universe that resists entropy and manages to combine a clear reductionist flavour with a vitalistic opacity (Kaufmann 2000). As – without any irony – physicist Doyne Farmer puts it: “It's not magic ... but it feels like magic” (Waldrop 1992). In the end, the approach of the Santa Fe Institute tries to canalize into physics many philosophical and meta-scientific topics and to

find a “third way” between holism and reductionism. But, as shown in the case of Kaufmann (among other examples), it fails and it develops a reductionist, non-philosophical interpretation of the concept of emergence.

The history of science and philosophy are filled with examples of attempts to explain everything using a few simple concepts and rules, and past failures should persuade future systemic thinkers to be more careful in theoretically “invading” specific disciplines or in expecting to solve conundrums raised by fields and topics very far from the one they were originally trained in.

But there are more important reasons to avoid any attempt to build a strong, decisive “general theory of emergence,” namely, some *de facto* limitations, which are related with a notion strongly tied with the topic of emergence: the concept of level. The first question I would like to raise is: how many levels are there? We have seen that Chalmers dismisses the whole notion of a hierarchy of “strong-emerging” levels, while systemic philosopher Ervin Laszlo (Laszlo 1972) presents a very articulated model of hierarchy, composed of a main hierarchical system and one local – but the latter is just an example of a potentially infinite series. The first system, which he calls “macro-hierarchy,” represents the purely physical reality, distributed on a ladder going from the space-time continuum and elementary particles to galaxy clusters and basically the whole physical universe. The local hierarchy, called “micro-hierarchy,” is about the terrestrial ecosystem, from organic molecules to human society. Of course Laszlo admits other potential micro-hierarchies, which – according to his model – seem more or less commensurable with the terrestrial one.

My preference goes to Emmeche, Køppe and Stjernfelt, who identify, as a working hypothesis, a ladder composed of four primary levels: the physical-chemical, the biological, the psychological, and the social. They also add many interesting details:

The ontology of levels we attempted to give was framed in a materialist and evolutionary perspective that implied that the relation between levels was considered to be inclusive, permitting the ‘local’ existence of different ontologies, all included within the physical level and non-violating physical laws. (...) the biological ontology is local to the extent that different biologies, different organizing principles of life, may emerge on other planets (who knows if life universally takes shape as the natural selection of DNA-coded genotypes?) (Emmeche, Køppe and Stjernfelt 2000).

According to them there is a further point of discussion, one about the degree of sharpness in discriminating levels and sub-levels:

One can argue at length about the number of (and demarcations between) the primary levels. Our choice of the four levels mentioned was in part pragmatic (thus, multicellular life and non-self-conscious psyche are seri-

ous candidates for further primary levels), but what is ontologically important is that such levels of reality can in fact be rationally distinguished (Emmeche, Køppe and Stjernfelt 2000).

In fact, it is always possible that, in the near future, new and finer and clear-cut ontological discriminations will emerge (for example between simple consciousness and self-consciousness), or that the ontological ladder will be completely redefined and redesigned.

Furthermore, “other ‘local ontologies’ of other higher levels may exist within the global, physical primary level, and we cannot tell beforehand which other initiating condition for mentality or sociality other ‘local biologies’ may constitute” (Emmeche, Køppe and Stjernfelt 1997).

I believe, then, that in the universe there could be an unknown number of “parallel hierarchies,” based on principles very different from the ones founding our own bio-psycho-sociological ladder. Moreover I want to add to Emmeche, Køppe and Stjernfelt’s approach one more consideration: these hierarchies could be ontologically non-commensurable to each other; for instance, the number and typology of levels could easily not be in a one-to-one correspondence with the levels of any other hierarchy. Inside the same hierarchy, there is, or there could be, a different kind of emergence for any given level.

All classifications of levels should be taken as preliminary, as further discoveries could force a revision of the number and typology of levels and sub-levels. In the end, although I am not persuaded, I have also to admit the possibility that no ladder exists at all, and the only truly emergent phenomenon could be consciousness. So, my question can be restated as: How many possible parallel ladders are there? Only one? An infinity? A number in between? Is there a ladder at all? No answer is possible right now.

I do however believe that there is a second *de facto* limitation, which I never found explicitly and exhaustively analyzed in scientific literature: I am talking about the possible emergence of highly speculative, future further levels. This consideration was suggested me by a specific anthropological theory, neoevolutionism. While discarding many concepts of social Darwinism (like the idea of progress), this approach maintains that evolution of human societies can be described objectively and divided into stages, which can be measured using empirical criteria – like the amount of energy used by a certain civilization or the quantity of information produced. A good example of this approach is Leslie White, author of the seminal book *The Evolution of Culture: The Development of Civilization to the Fall of Rome* (1959).

Without endorsing all the precepts and ideas of this approach to the social sciences, I would like to stress the similarities between White’s ideas and the so-called Kardashev Scale, developed in 1964 by the Russian astrophysicist Nikolai Kardashev (Kardashev 1964). Highly speculative, the Kardashev

Scale measures the level of technological and scientific advancement reached by a hypothetical extraterrestrial civilization. The scale includes three levels, labelled Type I, Type II and Type III, in accordance with the amount of energy a civilization has at its disposal (that is, the energy of its planet, of its stellar system, or of its home galaxy). The Kardashev Scale has been extended by other researchers, like Zoltan Galantai (Galantai 2003) and Michio Kaku (Kaku 2004), who talk about a Type IV civilisation; furthermore, Carl Sagan (Sagan 1973) proposed to add to this classification another dimension, related not to the energy available but to the information produced. An obvious objection to this classification is that, as we are talking about a civilisation more advanced than ours, it is impossible to guess its true nature and predict its behavior. But from my point of view, the implications are nevertheless clear: we can easily try to interpret Kardashev's classification from an emergentistic viewpoint, that is, to read the types as possible levels. Which can possibly lead to even more speculative – maybe far-fetched, but surely interesting – questions, which quite probably it will prove impossible to answer. For example: How many upper levels of complexity are admissible? Is there an upper limit to the levels of complexity? So we have a problem: As we are talking about levels of development beyond ours – which could definitely include new emerging properties – how can we plan to reach a complete, decisive, and coherent “general theory of emergence” any time soon?

5. UPPER LEVELS: METAPHORICALLY CLASHING AGAINST A WALL

The topic of upper levels is so interesting that it deserves further analysis to underline few other related problems.

First of all, let us go back to the problem concerning the number of possible upper levels, and let us ask again: is their number finite, or could it be infinite? I am not the only one here to suggest the possibility of the existence of an infinite number of levels, or alternatively, an infinite degree of complexity. For instance, in a different but related field, communication theory, Paul Watzlawick, Janet H. Beavin and Don D. Jackson suggest a similar possibility in reference to human cognitive self-perception – namely, our ability to “frame” and “read” our own surrounding reality and our self-interpretation by encapsulating it in higher and higher conceptual frames, on a cognitive ladder which is potentially infinite (Watzlawick, Beavin and Jackson 1967).

Secondly, about “cognitively transcending” upper levels: even if we can recognize their possible existence, we cannot say much more about them. Being, by definition, these upper levels beyond our own, I would say that, in

the very same moment we try to conceptualize them, or even only to think about them, we get “pushed back” to our own level of emergence, which inescapably “frames” our cognition. To put it in other terms: we can think of them because we have at our disposal a metaphoric ladder, on which every level is represented by a rung. And so we can see, touch, and analyze the rung we are on and the ones below it; in the case of upper rungs, we can imagine their existence, but we cannot really reach for them, just because we don’t have either the conceptual tools, or the metaphorical ones, to climb the ladder beyond our own actual level. Some philosophers think that human knowledge is intrinsically metaphoric. From the emergentistic perspective it could be useful to take a look at the work of George Lakoff and Mark Johnson on cognitive metaphors. In their seminal book they skillfully showed how our knowledge and even our everyday language is packed with metaphors of every kind (Lakoff and Johnson 1980); their work could be very useful because, besides some aspects of Bertalanffy’s analysis, systemic and emergentistic schools of thought never tried to explicitly understand the “metaphors they live by” – and this could be a very interesting topic to work on in the future.

Put in other terms: according to Ludwig von Bertalanffy (Bertalanffy 1968) scientific investigation is developing toward a “progressive demetaphorisation”, which means that, step by step, our scientific interpretation of the world is getting rid of every trait specifically related to the human experience. So for example, as our understanding of reality seems visual-based, quantum mechanics managed to get over it, developing a scientific worldview which is inherently “unvisualizable.” Together with the development of new technological tools for observation, this process pushed us far beyond our daily, visual-based, metaphoric interpretation of the world. All this allowed us to eliminate the many limits of our sensory experience – at least if we philosophically support a world-view based on scientific realism, and not, say, on empiricism or idealism.

Let us keep in mind that this erasure process already “cleaned” scientific investigation of many perceptual traits – colours, smells, sounds – and other features (and metaphors) might be cancelled in the future. So, one could ask: how far can we get with this process, before being compelled to get rid of emergence’s main metaphor, that is, the “ladder”? Will the “ladder” still stand? Could it withstand this (alleged) demetaphorization process?

A related question I would like to raise is the following. There are no real ladders, here, we know that, but so far this concept has been very useful – together with many other metaphors we live by. So now we should ask ourselves: is this concept forcing our hand? Maybe the idea of an infinite hierarchy is only an unintended and mistaken consequence of a metaphor (the ladder) taken too far.

Maybe it is even possible that, at a potential level beyond ours, the ladder metaphor does not hold; that from the upper level viewpoint there are no ladders at all. So one could wonder: while climbing this ladder composed of emerging levels of complexity, and trying to reach for the upper rungs, are we metaphorically clashing against a wall?

6. THE PLATONIC WAREHOUSE

Let us now look at a different order of problems connected with the concept of emergence and not yet solved, maybe because they coincide with the broadest and deepest problems of philosophy at large (and poorly analyzed and understood by many classic emergentistic thinkers). Let us ask: what is the ontological “source” of emergence? As I said before, it is possible that every level has its own way to emerge from the lower level. In spite of this, we aim to find a general theory of emergence, which should conceptualize every trait the different kinds of emergence have in common.

We need an ontogenetic source; so a unifying theory of emergence should be really unifying. That is: if there are different kinds of emergence at any level and on any possible ladder, they all should be explained through a deeper and more general form of emergence, in other words, a theoretic “source” of all emergence. And not only that: a general theory of emergence which aims to be general in the widest possible sense, should even explain itself, namely, explain how emergence emerged in the first place, and how it can generally emerge. Of course to expect this question to be answered is like expecting an ultimate, complete answer to all the main problems posed by theoretic philosophy. Nevertheless, in the fields of systems theory and complexity theory, there have been some attempts, but – in my opinion – rather naïve or incomplete.

I would like to mention just a couple of them, the “morphic field” of Rupert Sheldrake and the so-called “digital philosophy” promoted by Gregory Chaitin, Edward Fredkin, Konrad Zuse and Stephen Wolfram. According to the latter scholars – mostly mathematicians and theoretical physicists – everything that exists – space, time, thought, consciousness – is a consequence of a huge, unitary process of computation (Zuse 1969, Fredkin 1992, Wolfram 2002). The whole universe should be seen as a computer of unimaginable size. This self-proclaimed “digital philosophy” reflects the spreading of the idea that the process of computation could be everywhere, and actually the computational processes performed by human-made computers could be seen as a smaller, primitive version – or even a simple manifestation – of this huge all-encompassing universal process of computation. As digital philosophers put it, “computation is one,” that is, a single “computational stream”

divided in many sub-streams. I do not think this approach is really persuasive, let alone satisfactorily complete, as it does not even try to answer the most fundamental question of all: who or what “computes” our reality? According to Friedkin, this “pan-computational” process is carried out by a not-better-defined “Other,” whose nature we do not know. Another universe or dimension? A “meta-universe”? No answer is forthcoming.

The concept of morphic field was coined by British biologist Rupert Sheldrake to indicate an alleged “field of information” which acts as “database” as well as “development drive” for both organic and abstract forms – a collective “library” and an ontological and emergentistic “source” (Sheldrake 1981). I would say that Sheldrake’s approach is vitalism, plain and simple, while digital philosophy’s is reductionist. But at least someone – inside the variegated complex systems community – is trying to answer the following question, which I never saw explicitly stated: where are the levels of complexity we see around us from? Are they totally, genuinely “new”? and if so, what is the source of this “novelty”? Can it be conceptualized like the age-old idea of *creatio ex nihilo*? On the contrary, if those levels of emergence are not really “new”, but already implicitly existent, “where” are they before coming into existence? Are these upper or alternate, not-yet-existent levels stored in a kind of “Platonic warehouse” or in a Popperian “World 3”? What really matters here is the fact that the problem of origin or source of emergence looks very far from being solved.

7. WHY EMERGENCE SHOULD BE TAKEN AS A REGULATIVE PRINCIPLE INSTEAD

My partial conclusion is: there is so much philosophy in emergentism and theory of complexity, and so little recognized. This “elephant in the room,” these unaddressed philosophical problems, make me state the following: If “emergence” has to be interpreted as an ontological concept, this implicitly means that it cannot be taken as a simple scientific concept with immediate utility. As mentioned above, one of the accusations flung at Bertalanffy’s General Systems Theory was about its programmability. And what if this programmability could be turned into something positive, that is, into a virtue?

Let us make a digression and try to set things right about the systemic approach and the related currents (General Systems Theory, Theory of Chaos, Theory of Complexity, and so on). In spite of many naiveties and few results, their philosophical intentions are more than noble: to allow, or even foster communication among disciplines; to favor the positive interchange of concepts and ideas among different fields; in the end, to be a building block

for something we have not heard of for a while, namely, a kind of “philosophy of nature.” Like Bertalanffy, and like his more famous forerunners (such as Alfred North Whitehead), the contemporary systemic approaches aim to go beyond the present separation among disciplines or between Snow’s “two cultures,” and rebuild (maybe unrealistically, maybe not) a kind of renaissance mentality.

Although very ambitious, the goal to revive such a typology of philosophical stances is definitely easier to achieve than the construction of an ultimate general theory of emergence. Instead, philosophy, and in particular systemic thinking, could focus on the creation of a general emergentistic “draft” in which to insert (little by little) all the small pieces of data and discoveries about reality that natural and social sciences will find in the near and far future. It should be a flexible map, a map able to accommodate “reductionist” discoveries and new, “emergent” processes, and consequently to change on demand; furthermore, it should push us to reflect on our emergentistic framework, philosophically asking again and again the question of the ontological source of the emergence and the metaphoric nature of the concepts it uses.

The pragmatic approach advocated here – that is, the interpretation of emergence as an ontological or meta-scientific framework – could rightly be called an ontological “regulative principle of organization,” more or less in the same sense that Kant used for the concepts of “soul,” “world,” and “God.”

8. ADVANTAGES OF THE PROPOSED APPROACH

Now a new question arises: What is the point in pursuing this “light” version of a general theory of emergence? Why cannot the special sciences keep doing what they have done so far with great results, without caring about other disciplines? Is there some advantage in talking about systems, emergence, levels of reality, and so forth?

First of all, as shown above, this approach authorizes from an ontological point of view natural and social sciences to talk about their own objects without waiting for the discovery of the “bottom” of reality – if it is possible to find that at all. To put it in another way: I believe it allows – at least in principle – the foundation of every discipline *iuxta propria principia* (that is, according to their own principles).

Secondly, it could help to reconcile (if this is the goal) the perceptual world (that is, the world naively perceived) with the comprehensive worldview offered by scientific realism. In other words this emergentistic approach could help by ontologically and epistemologically accommodating

both the data coming from human ordinary perception and the theories and data provided by all the different disciplines working on this topic (psychology of perception, cognitive neurosciences, and so on).

Thirdly, it could repair one of the main defects of the classic systemic approaches. In fact, the picture built by those has many gaps, whether from the viewpoint of logic, mathematics, or metaphysics. In other words, while General Systems Theory was meant to be a truly all-inclusive philosophy of nature, many of the contemporary theorists of emergence (although with a certain number of exceptions) seem to focus mostly on physics, biology, and philosophy of mind, and omit that a “general theory of emergence” should be really general, and so should include every kind of system, even the more abstract ones.

Last but not the least, such an approach does foster communication among disciplines, and it can definitely help to find a way out of the over-specialization that plagues contemporary knowledge, by providing philosophers, natural scientists, and social scientists with at least a common ideal goal.

And now let us just try to offer an example of the usefulness of this proposal.

9. A PRACTICAL EXAMPLE: DOWNWARD CAUSATION, FREE WILL, AND A NEW PHILOSOPHICAL ANTHROPOLOGY

Inside the theory of emergence the concept of downward causation exerts a function as important as the one of level; actually we can say that, from many points of view, they are one and the same.

The concept of downward causation implies that events or phenomena belonging to a certain level can act upon events and phenomena of the lower levels; this specific inter-level relationship, together with its opposite – that is, upward causation, which illustrates how some entities at a certain level produce other related entities at a higher level – are basically the core of any emergentistic philosophy.

According to Emmeche, Køppe and Stjernfelt, it is possible to hypothesize at least three kinds of downward causation: a strong downward causation, a medium one, and a weak one, all the three defined by the strength of their influence on their lower levels (Emmeche, Køppe and Stjernfelt 2000). These scholars discriminate three different kinds of downward causation:

The idea of strong downward causality may be briefly described as follows: a given entity or process on a given level may causally inflict changes or effects on entities or processes on a lower level. (...) (It) introduces a non-

scientific, that is, irrational principle, and violates the assumption of the inclusivity of levels. (...) Medium downward causation can be defined as follows: an entity on a higher level comes into being through a realization of one amongst several possible states on the lower level -- with the previous states of the higher level as the factor of selection. This idea can be made more precise with the aid of an interpretation of the concept of "boundary condition." ...[In the case of weak downward causation] the higher level is conceived as an organizational level, characterized by the organization, the whole, the pattern, the structure, in short the form into which the constituents are arranged. [...] it must not be identified with physical or mechanical reductionism; the forms of the higher level are supposed to be non-reducible. In contrast to medium downward causation it is characterized by not admitting the special interpretation of boundary conditions as constraining conditions, and hence it does not allow the possibility that several higher level phenomena correspond to one and the same lower level phenomenon.

Emmeche, Köppe and Stjernfelt opt for the third kind, although I believe that developments in future scientific investigation could make the first or the second one more palatable. Anyway, no matter which kind of downward causation one decides to choose, this concept could be a good starting point to unify the bulk of knowledge about human beings that natural and social sciences – from neurosciences to genetics, from psychology to anthropology, to linguistics, to sociology, and so forth – are collecting. This goal could be achieved by offering to those disciplines a common vocabulary and a common web of concepts. A similar attempt was already pursued in the first half of the Twentieth Century by the school of philosophical anthropology (Scheler 1928, Plessner 1928, Gehlen 1940, Cassirer 1944), and maybe the time for a new, perhaps less pretentious attempt is coming – and actually some attempts in this direction are already underway (see for example Murphy, Ellis and O'Connor 2009). From this viewpoint, I would like to suggest that a philosophical problem worthy to be read within this emergentistic mainframe could be that of free will.

Almost as old as philosophy itself, the debate about existence and nature of free will – which continental philosophy sometimes perceives as something belonging to the Middle Ages and out of fashion – is alive and vital on the analytic side of philosophical speculation. And, among the many philosophical problems faced by contemporary thought, free will is one of the most interdisciplinary – as it probably lies at the heart of the debate on human nature (nature versus nurture, genetics versus environment and so forth). And in fact this theme can be approached at least from two, maybe three sides.

First of all, we can discuss the existence and nature of free will from a general point of view, asking if it exists at all, if it is permitted by a deter-

ministic worldview, if it is indeterminist in its nature, and so on. Related with this approach, we have the problem of moral responsibility, or, put in other terms, the compatibility of this or that idea of free will with our social and ethical habit to keep human beings accountable for their actions. This approach produced a great number of different positions (from compatibilism to incompatibilism, from hard determinism to metaphysical libertarianism, all interwoven in many ways), and involves too many thinkers to name here.

Secondly, we can investigate different scientific fields – like neurosciences, evolutionary biology, cognitive psychology, just to name a few – to verify if free will really exists. And actually some researchers, like Benjamin Libet, cast doubt not only on the existence of free will, but even on the real extent of our self-awareness (Libet, Gleason, Wright, & Pearl 1983; Libet 2004).

Thirdly, some stimulating research is being done – through the tools of contemporary psychological investigation – concerning what regular people think about themselves in terms of free will, self-agency, self-efficacy and so on (see for example: Baumeister, Crescioni, and Alquist 2009).

Although the problem of the nature and coherence of free will, and the problem of real existence of free will, are and should be treated as separate problems, I think there are a few topics and arguments inside one or the other battlefield which are interdisciplinary in nature. For instance, at a certain point the supporters of an incompatibilist and libertarian take on free will tried to provide some evidence to their view quoting quantum physics' indeterminism as a possible source of our free volition. The main proponent of this approach – which is indeed fascinating – is Robert Kane, who in his book *Free Will and Values* talked about “probability bubbles” at the roots of human volition (see Kane 1985). Far from being satisfied by Kane's view, some philosophers criticized the alleged usefulness of quantum indeterminism in this debate. According to Derk Pereboom neither determinism nor indeterminism account for free will (Pereboom 2001), and criticism toward the quantum interpretation of the latter is expressed also by J. J. C. Smart, who, in a famous passage, notes that: “Indeterminism does not confer freedom on us: I would feel that my freedom was impaired if I thought that a quantum mechanical trigger in my brain might cause me to leap into the garden and eat a slug” (Smart 2003).

In my opinion what matters here is not these quantum physics interpretations' soundness, but rather the fact that they utilize concepts and ideas belonging to a completely different field, without much discussion about the relationship between quantum phenomena and bio-neurological ones – which is exactly what an emergentist worldview would and should do. In fact, if one decides to endorse a general theory of emergence and to support,

say, a strong view of downward causation, any interpretation of free will in the light of quantum mechanics indeterminacy would sound reductionist at least, and then should be dropped or revised. In other words, here is my proposal: the emergentist model could work as a tool to test free will not in itself, but against the natural order as we know it (the whole body of physical laws, the emergentist ladder, and so on).

Another interesting point is the following. Social sciences and psychology provided us with a rich amount of data about many different topics apparently not related to the problem of free will, which actually are connected with it in various degrees: for example, we could talk about the nature and existence of introspection (which could be seen as a tool to process free decisions), the related topic of meta-cognition, long term planning and – more broadly speaking – a theme underlying every specifically human trait, that is, abstract symbolic language. I think that an emergentist model offers a framework in which we can distribute and accommodate all the growing interdisciplinary knowledge relative to free will provided by social and natural sciences. Let us put it in other terms. Neurosciences are providing their own take on free will, and some researchers are actually denying it or even suggesting that our thought is mostly unconscious – and therefore outside free will's reach. This is exemplified by the case of Benjamin Libet's work on readiness potential quoted above. So, one could provocatively ask: what's the point in defending, say, a libertarian version of free will if – in the meantime – some neuroscientists basically state that it is just an illusion? That is why trying to have different fields talking to each other through an emergentistic common ground could be a good and fruitful thing.

A third point is related to the idea of “degrees of freedom”. One could think that free will is not about “all-or-nothing”, that there can be many diversified constraints which compel us to talk about “degrees of freedom”. This approach is known as “restrictivism”: the idea that only a small number of human actions is really “free”. For example Kane talks about “self-forming actions”, related to moral, all-important decisions difficult to evaluate and take (Kane 2007). Imagining these really “free” actions existing along with or fighting against other non-free actions and thoughts could help to make sense of an age-old philosophical topic, the problem of the “weakness of the will,” that is, actions taken against our best judgment. And so I believe that the emergentist view could allow us to unravel the different causes of human actions, partitioning them according to the field and the emergent level they belong to, correctly connecting them to each other and tidying up this whole topic. Another example could be Harry Frankfurt's hierarchy of desires (Frankfurt 1971), which could be easily accommodated in an emergentist view of the mind.

Fourthly, if one supports a radical version of the libertarian approach (an-

ti-deterministic, but also anti-indeterministic), one could find in emergence a good setting to locate this apparently counter-intuitive position. Usually the inexistence of a third quid between necessity and randomness is taken for granted, but some philosophers would like to find a “third way” between determinism and pure chance, in order to save both moral responsibility and real freedom, establishing human nature as something completely autonomous (*causa sui*). Easier said than done, but if there is even a small chance to achieve this goal, it probably lies in an emergentistic model (incidentally, I like this controversial idea of a possible “third way” to free will, although I think that, at least for the time being, it retains a certain degree of opacity).

More generally speaking, we could easily institute a parallelism between free will conceptions and downward causation conceptions, to see how many different kinds of downward causation are possible with emergentism; if they can fruitfully accommodate different takes on free will; and which of the latter are compatible with what it is scientifically established about human beings.

In the end, what can a theory of emergence do for free will? An emergentist model could provide a frame of reference to systematize all the interdisciplinary knowledge about free will, in what can be seen as a program of cross-fertilization. It is just a program, but isn't emergentism intrinsically programmatic?

10. CONCLUSIONS

Summarizing all the ideas expressed in this paper:

1. Emergence is back, and this concept can be found in many different disciplines.
2. Although it could seem mainly a scientific notion, it is a philosophical one, with a long history.
3. That is why it should undergo again and again a careful philosophical analysis.
4. It should be considered an ontological notion rather than an epistemological one, just because pragmatically speaking it confers ontological autonomy to every discipline.
5. Emergence should not be taken as an ultimate, even arrogant “Theory of Everything,” because such an attempt would face many *de facto* obstacles, like the factual impossibility of knowing precisely how many levels of reality there are, how many there could be, and how many different local ontologies exist.
6. There are many philosophical problems related to a theory of emergence still to be adequately answered, such as the nature and possible num-

ber of upper levels, the implicitly metaphoric nature of some emergentist concepts – like the “ladder” – and the ontological source and status of existing and future levels of complexity.

7. Emergence should be taken as an ontological and meta-scientific regulative principle of organization, because it is a flexible approach and could help philosophy, natural science and social sciences to systematize and organize the data they are discovering and the theories they are developing little by little. Furthermore, this approach could satisfy – first of all, by recognizing it – the “human, too human” ambition and burning desire to know the truth in its entirety, or at least to come closer and closer to it, and certainly to talk about it.

8. A core concept of the emergentist worldview, downward causation, could be useful in accommodating our ever-growing body of knowledge about Man; it could also foster interdisciplinary cross-fertilization, accommodate many different positions on existence and nature of free will, and test them against what we know so far about the nature of life and the physical laws of the universe.

Although the final destination is beyond our grasp, this is a road worth traveling.

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DIALOGUE BETWEEN SOCIOLOGY AND PHILOSOPHY: ONTOLOGICAL TRUST, SEARCH FOR MEANINGS, AND SELF-REFLECTION IN AN ERA OF UNCERTAINTY

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ABSTRACT

The aim of the article is to initiate a dialogue between sociology and philosophy, in order to clarify the relationship between ontology and society, subjectivity and the massification process and between the need for meaning and the spread of nihilism. The starting points of my analysis are Giddens' claim that the formation of identity in contemporary society requires ontological trust and Touraine's thesis of the end of society which calls for the formation of subjectivity. In the dialogue between philosophers such as Martin Heidegger, Friedrich Nietzsche, Søren Kierkegaard, Karl Jaspers and sociologists such as Emile Durkheim, Max Weber, Anthony Giddens and Alain Touraine, I reflect on the meaning of ontological trust, the way in which it can be achieved and why today it has become central to the sociological debate. The fruit of this dialogue is that what was once considered society's role is now recognized as the burden of the individual himself. For this reason ontological trust is fundamental for the formation of a strong and stable identity, for overcoming nihilism and finding new meaning and for the affirmation of the ethic of responsibility.

INTRODUCTION

In this article I would like to reflect on a series of issues that I consider essential to understand the nature of the social-historical period we live in. I would like, in particular, to address the question of the "destiny of modern man" in contemporary society. By destiny I mean "the individual social-existential experience".

At the beginning of the modern era, man¹ had certainties. Rationalization and secularization taught him that he was the author of social order, and believing in those tools helped free him from the yoke of tradition. Science, for instance, gave the impression that one could control nature and with it control the development of the forces of production. Politics had secured the control of national boundaries and, most of all, the certainty of control of the good functioning of democracy. Modern man had built his myths: progress, freedom and equality, and thanks to them he thought he would live in the golden age.

From the beginning of modernity until today there have been profound changes that have led some philosophers and sociologists to speak of post modernity (Lyotard 1979), or of late modernity (Giddens 1990, 1991). Even if it is hard to believe that we are at the end of an era and at the beginning of a new one, it is evident that the certainties of early modern man have been lost by contemporary man who lives in a society where risk rather than security is the prevalent condition (Beck 1992), where radical individualism has replaced solidarity, where free competition and the ideology of the fittest are the new myths. It is not by chance that the British sociologist Anthony Giddens, serious observer of contemporary societies, has mentioned the necessity to rely on “ontological trust” in order for the individual to face deep uncertainties of contemporary society. Or the French sociologist Touraine, who believes that only strong subjectivity, which implies self-reflection and the strength to accept the responsibility for actions taken, is an answer to the end of society. By the end of society Touraine means the end of solidarity (Touraine and Khosrokhavar 2000).

Neither sociologists believe that social struggle is a valid opposition to the uncertainties of contemporary society, on the contrary they find the answer in the individual himself. The individual must be able to find in himself the security the society does not guarantee as well as the integrity that will make him responsible toward himself and the other. For this reason, ontology is considered for the first time so crucial in the sociological literature. A dialogue with philosophy is then in order, given that ontology has always been a philosophical field. I will address in particular the question of how ontology and society are connected, in order to clarify how ontological trust as well as strong subjectivity can be achieved. My thesis is that the search for meaning is what connects the two, and self-reflection is the way meanings are found.

The Greek tragedies have shown the central role the quest for meaning has in one’s life and how it can be fulfilled through the process of self-reflection (know yourself). Modern man, and more so contemporary man has

¹ I use the term man, and the pronoun he, in the general meaning of human kind.

lost the capacity for self-reflection because he has been trained to see instrumental rationality as the only valid tool for acquiring knowledge. Weber has been the main interpreter of the process of rationalization which he saw as the main feature of modernity. The main consequence of such one-dimensionality has been the loss of meaning and the loss of the tragic, which is the inability of man to reach that level of reflection where the truth about existence is discovered:

Man cannot return to an immediacy without reflection, without losing himself: he can, however, follow this path to its end so that rather than succumb to reflection, he can reach his own foundation by means of it...Therefore, infinite reflection, precisely through its limitlessly mobile dialectic, is the condition of freedom...In this encounter Existence is given to itself as a gift so that by giving itself up to infinite reflection, it fully masters it (Jaspers 1986 [1883-1969], 43-44).

Contemporary man instead finds himself in an iron cage (Weber) and nihilism is his answer, confining himself to an existential desert and at the same accepting to be part of the mass society which sees the individual as a small cog on a big machine:

Today the spirit of religious ascetism- whether finally, who knows?- has escaped from the cage. But victorious capitalism, since it rests on mechanical foundations, needs its support no longer [...] No one knows who will live in this cage in the future, or whether at the end of this tremendous development entirely new prophets will arise, or there will be a great rebirth of old ideas and ideals, or, if neither, mechanized petrification, embellished with a sort of convulsive self-importance (Weber 2002 [1904-1905], 124).

Weber was inspired by Nietzsche who declared that modern man suffers from the problem of giving an answer to that screaming question , ‘To what purpose do we suffer?’ (Nietzsche 1956 [1887]).

In this article I will first of all define the meaning of ontology and its link to the social sphere; furthermore, taking off from the reflections of Durkheim and Weber, I will move on to consider the social-existential drama of contemporary man: being between anomy and the iron cage. I then consider how contemporary man can overcome this social-existential condition, and become an individual rather being just a member of the masses, with a new emphasis on self-reflection and the quest for meanings. These two can save contemporary man from being stultified in a condition of ignorance about his destiny, believing that the struggle for survival is the only meaning of life and the ideology of the fittest the only way to face it.

1. ONTOLOGY: FROM BEING TO EXISTENCE

Heidegger defines ontology as ‘the doctrine of being’ which deals with general definitions of being (Heidegger 1999, 1)². He further clarifies his idea stating that being must be understood as ‘Being in the world’. It is clear that for Heidegger the ontological question of being cannot be considered in abstract terms, but rather in relation to socio-historical reality. The main question concerns then the relationship between the I and the world. For Heidegger the “I” is immersed in the world and understanding his being in the world, understands his *Dasein* (existence). In his act of understanding there is also his freedom to transcend the limitations because he can make a choice and therefore he can make his existence his own project.

Heidegger distinguishes between authenticity and inauthenticity. The individual who is able to care about his being in the world, therefore exercising his freedom, is authentic, rather the individual who accepts the limitations, in other words accepts his condition without intervening with his own project is inauthentic (Warnock 1970). Being in the world thus means both to be determined and at the same time to have the possibility of overcoming the limitations, which is an act of freedom.

The philosopher Jaspers further clarifies the relationship between the I and the world:

The animal is bound to a natural fate which automatically fulfils itself in accordance with natural laws. Man is likewise bound but in addition he has a destiny the fulfilment of which lies in his own hands. Nowhere, however, do we find man as a completely rational being; he is borne along by natural necessity, which reaches into the furthest ramifications of his reason. In earlier centuries the imagination of men conceived of angels as pure intelligence. Man, however, is himself neither animal nor angel; he shares the condition of both but the existence of neither (Jaspers 1968 [1923], 8).

For Jaspers, one’s possibility to fulfil his destiny is also the reason for his fragility since freedom gives him infinite possibilities which could be the cause of illness:

Here the incompleteness and vulnerability of human beings and their freedom and infinite possibilities are themselves a cause of illness. In contrast with animals, man lacks an inborn, perfected pattern of adaptation. He has to acquire

² The reflection on being has a long philosophical tradition. I consider only those authors who have emphasized the relationship between the ontological sphere and the socio-historical conditions.

a way of life as he goes along. Man is not merely pattern, he patterns himself. In so far as he is merely pattern, he is nearer to the animals (Jaspers 1968 [1923], 8).

Jaspers then uses the concept of psyche for describing the experience of Being in the world:

Psyche is not to be regarded as an object with given qualities but as '*being in one's own world*', the integrating of an inner and outer world': "among these categories is that of life as an existence in its own world since all life reveals itself as a continuous interchange between an inner and an outer world (Jaspers 1968 [1923], 12).

Jaspers' definition of being in one's world adds one aspect with respect to Heidegger: he clarifies the relationship between the inner and the outside world, putting emphasis on the experience (psyche) rather than on action (caring). For Heidegger, in fact, the individual is 'thrown into world' (*Verfallenstein*) and he is able to make his *Dasein* (existence) through an act of caring for the world³.

Jaspers' analysis clarifies the central points that interface the relationship between the ontological and the social sphere: first the fact that the individual existence develops as a continuous interchange between an inner and an outer world, and it is in this exchange that the meaning of existence is found; then, the recognition that man shapes his own destiny making choices and therein lies his freedom: finally, the recognition that to make choices man faces infinite possibilities which may cause illness. For Jaspers then the question is not authenticity vs. inauthenticity, but between freedom and illness.

The analysis of the two philosophers have shown that the individual is not totally controlled and shaped by society. Freedom lies in the I (conscience), in the ontological sphere, however, the I is immersed in the world, therefore must relate to it in order to live his own freedom. The relationship between the ontological and the social dimensions is then crucial because it is where the individual can overcome his given destiny in order to become the creator of his own destiny, within certain limits.

In conclusion, ontology is that sphere where man stands before infinite possibilities which require that he make a choice. In making the choice he experiences freedom, because he exercises his will as a project. Socio-historical reality however is where the infinite possibilities and the act of making a choice finds limits that cannot be avoided or ignored since socio-

³ Already the Greeks have recognized the central role played by the psyche, also called the soul, in human existence, which they also defined as the place of inner experience.

historical conditions are the necessary ground on which his will can be exercised and his project realized. For this reason it is not possible to speak of man's project in general terms, but to define it with respect to the socio-historical conditions in which he lives⁴.

The Greek tragedies represent clearly the link between the ontological and the social. They represent the drama of the individual who is forced to confront the choices he has made given certain socio-historical conditions, that is, the pattern he has chosen for his life, and the unexpected consequences of his choices. For this reason, the Greeks used the word destiny for describing human existence.

Man's existence has its roots in both the ontological sphere where there lies the freedom of the individual and in the social realm, where the constraints are. The ontological and the social are then strictly related, to deny one means to give a partial view of man's existence.

2. DURKHEIM: SOCIETY AS *SUI GENERIS* ENTITY

Sociologists have rephrased the link between the ontological and social sphere in terms of the relationship between the individual and society. This question is at the centre of Durkheim's sociological analysis. He recognizes a primacy of society arguing that the individual needs society because without its norms and rules, and, above all, without society in its symbolic dimension, man would be in chaos.

For Durkheim man has two parts: the materialistic part and the spiritual part. The former is dominated by infinite desires which must be controlled by the latter. The spiritual part comes into life through the internalization of society as a *sui generis entity*. With the expression *sui generis entity* Durkheim wants to underline the symbolic nature of society. He explains it arguing that the symbolic is triggered by the feelings of gratitude which transform the group into a sacred entity.

Given that it is the individual conscience that can attribute a symbolic meaning to something, we can argue that even though Durkheim wants to avoid recognizing an independent role of the individual conscience, and for this reason most of his critics have accused him of social determinism, he is forced to bring it in as the place where the group's transfiguration into a sacred entity occurs. He does not speak of freedom and choices, but of the in-

⁴ The question of the relevance of ontological trust is also present in the psychoanalytic literature. Particular authors such as Erik Erikson (1963), Peter Laing (1963 [1950]), have addressed the fundamental importance of the formation of trust as result of the interaction with the mother. In such interaction they also see the beginning of a social relationship.

dividual need to be connected to a superior entity, which inspires respect and submission, both expressions of the feeling of the sacred. Even though Durkheim does not mention the ontological sphere, de facto he introduces it because the ontological sphere is where the capability for transfiguration is, which is the feeling of the sacred.

The role of the sacred in the formation of the social bonds between the individual and society emerges very well in his work *The Elementary Forms of Religious Life* (1965 [1912]). Durkheim was a structuralist, he believed that, in spite of social changes, certain structures remain the same. This is particularly true of the fundamental connection between the individual and society. In order to explain it, he thought it better to analyse this relationship in primitive society where it was still very strong. The social life of primitive man was grounded in the sacred, whereas modern man has a far weaker connection with it and for this reason where once there were social ties there is now individualism, where once there were meaning now there are pathologies. Pushed by his commitment to construct sociology as a science (Jones, 1998), he saw the source of the sacred in the group's ties, however group ties could have such role only if perceived as sacred. Nevertheless, for Durkheim individual consciousness is grounded on collective consciousness therefore he denies the existence of the ontological sphere as separate from the social one⁵. There is then in Durkheim's theory of society as a *sui generis* entity a twist that partially legitimizes the criticism of him as being a reductionist. However, I believe that the definition of society as a *sui generis* entity and social fact as *res* lose their deterministic character if interpreted in a phenomenological way, as the following quotation illustrates: 'It is the Sache, res, the question that must be analyzed, as it presents itself, not in its factuality, on the contrary in its essentiality' (Bello 1992, 29).

The closeness to the phenomenological view emerges also if we consider the development made by Edith Stein, pupil of Husserl, with respect to the phenomenological method. Edith Stein, in her seminal work on empathy that she developed in her dissertation, moves Husserl's emphasis from the transcendental ego to the relation with the other⁶.

Edith Stein wrote her dissertation in 1911, the year Durkheim wrote his "Communication to the International Congress of Bologna", where he clarifies the difference between value and reality judgment. The following year,

⁵ The relationship between a symbol of the sacred and the formation of positive feelings is also present in the work of C.G. Jung. Both authors share the idea that the symbol of the sacred creates inner unity, and reinforces the sense of identity.

⁶ "In her dissertation on empathy, done under Husserl's supervision, she accepts the method elaborated by her teacher and she applies it in a genial way, above all if we think of her young age, to the analysis of the intersubjective field, to the knowledge of the other" (Bello, 1992, 60).

he published *The Elementary Forms of Religious Life*, 1912. Even though from two different perspectives they both underline the link between conscience and feelings, between conscience and the relationship to the other (Stein 1989 [1917]).

Even if Durkheim speaks of collective feelings and not of a dyad, the similarities with the German philosopher lie in the recognition of the link between conscience and feelings. St. Augustine and the medieval mystics, who also underlined the relationship between love and conscience, between God and conscience, already saw such a link. In their understanding, the spiritual man prevails over rational man, and conscience is not grounded in Cartesian doubt but on feelings.

The same view is shared by a few critics of modernity, for instance Simone Weil, the French philosopher who was trained in the Cartesian method, which she abandoned for mysticism and the rediscovery of spirit beside reason (Weil 1999). The same view was shared by the Spanish philosopher Maria Zambrano who in her book *Man and the Divine*, sustains that at the origin of perception there is the sacred: "There are yet neither "things" nor beings in this situation; they become visible only after the gods appear and have been given names and shapes. Gods seem to be, then, a form of agreement with reality" (2001, 26). Zambrano continues her reflections saying: [...] the initial primal relationship of man with the divine does not occur in reason, but in delirium. Reason will channel delirium into love'. Further, she adds: 'the supremacy of psychiatry coincides with the sacred, the divine not yet revealed' (2001, 24).

Durkheim's emphasis on religion thus means for him the refusal of the Cartesian view and of the materialistic view. His evaluation of primitive man, because of his roots in the sacred, is an implicit critique of modern man, who has lost such roots. Moreover, Durkheim, valuing the religious life of primitive man, has refused a linear view of history, and with it the idea that modernity is the most advanced stage of humankind and has nothing to learn from the past. On the contrary, modern man, according to Durkheim, must rediscover the primitive man in himself in order to go back to his roots, to the deep emotional ties with the group, to the sacred, even though the idea of the sacred might have a different content.

The Jewish man, grounded in the Old Testament, discovers the New Testament, and with it the idea that law is connected to deep feelings of communion. Durkheim's reductionism is thus only apparent.

3. INDIVIDUALISM AND THE CULT OF MAN: TOWARD A NEW RELIGION?

Durkheim's deep interest in Religion emerges in the letter that he sent to the

English priest, Simon Deplaige, Durkheim's contemporary, who attacked him on a series of articles published by the *Revue Neoscholastique*. Deplaige accused Durkheim of having raised society to a level superior to that of the individual. Durkheim answered the English priest with a series of letters he wrote to the editor in which he underlines the profound impact his discovery of the role religion plays in society had on him. After making this discovery in 1895, his way of thinking changed: "This reorientation was entirely due to the studies of religious history which I had just undertaken, and notably to the reading of the works of Robertson Smith and his school" (Durkheim 1907, 612-613).

He accused then, Modernity, with its loss of roots, with its separation of feelings from reason, of causing social and individual neurosis. This is explained by Durkheim as the fading of the link between the individual and the group, between the individual and the symbolic. He defines this situation with the concept of anomy; one of the main symptoms is the increased rate of suicides (Durkheim 1951 [1897], 924).

Bellah in his introduction to Durkheim's sociology of morality poses the question whether for Durkheim the increase in suicides might be a symptom of a pathological society. The American sociologist recognizes that Durkheim considers it a sign of sickness of modern society, together with the appearance of pessimism. He concludes that for Durkheim the problem is one of meaning, of man knowing the purpose of his existence and of legitimate standards for judging his own actions (Bellah, 1973, p. xxx). Durkheim, the scientist, has never been separated from the social reformer, who believed that history can not go backward and for this reason saw the good side of individualism. Given that individualism fosters the cult of the individual a new religion can develop which can renew the feeling of the sacred:

Society has consecrated the individual and made him pre-eminently worthy of respect. His progressive emancipation does not imply a weakening but a transformation of the social bonds. The individual does not tear himself from society but is joined to it in a new manner, and this is because society sees him in a new manner and wishes this change to take place (Durkheim 1924, 72).

The cult of man helps the individual to overcome his egoistic attitudes and to reach a level that obliges him to come out of himself and relate to others:

If, moreover, we remember that the collective conscience is becoming more and more a cult of the individual, we shall see what characterizes the morality of organized societies, compared to that of segmental societies...It only asks that we be thoughtful of our fellows and that we be just, that we fulfil our du-

ty... (Durkheim 1947 [1893], 407-408).

Even though Durkheim does not speak of subjectivity or self-reflection, he is forced to see that the features of modernity require that the individual himself become more aware of the need to respect the other and to be just with the others. Before, Durkheim saw society having such role, but with the affirmation of individualism he was forced to accept that the same role can only be fulfilled by the individual conscience, without an external authority.

4. THE PHILOSOPHICAL VIEW: THE LOSS OF TRAGIC AND NIHILISM

The analysis of the ontological drama and how nihilism is the answer to it in modern times has been carried on by the existentialist philosophers, among whom I focus on Nietzsche, Kierkegaard and Jaspers. The analysis of Nietzsche's and Jaspers' are particularly relevant given that their works have deeply influenced Max Weber's analysis of modernity and his claim that modern man is living in an iron cage.

Nietzsche's main thesis is that the culture of the tragic ended with Socrates and it has meant the separation from the tragic and consequently the loss of roots. Socrates in fact claimed the superiority of reason over the tragic and mythical culture (Nietzsche 2000 [1872]). For Nietzsche the tragic is man's deep experience of the truth of human existence: pain. Pain is the result of an intrinsic inner disunity, represented in the Greek mythology with Dionysius, who symbolizes a primeval status of division and dismemberment. The Greek's pessimistic view, for Nietzsche, is the truth of life (Nietzsche 2000 [1872]).

The Socratic epistemological revolution was followed by another important epistemological revolution, the advent of the Judeo-Christian view, which created a divided conscience whose main imperative is no longer the will to power but guilt lived as sin and the need to expiate it. Ancient man was at one with his conscience; thus, the main imperative was "know yourself", and the main acknowledgment was the recognition that the tragic is the essence of life. Christianity has replaced the tragic with the idea of salvation, substituting the Greek pessimistic view with guilt and the fear of sin (Nietzsche 1956 [1887]).

With the advent of modernity, another epistemological revolution occurred. Gradually, the knowledge that God is dead replaced the Cristian faith with nihilism. Nevertheless, man cannot endure nihilism. He must find a way to discover new values and with them to reach a new meaning of life (Nietzsche, 1995 [1883-1891]).

Kierkegaard has also analysed the consequences of the process of secularization and rationalization in Modern Times. He argued that modernity has left the individual entirely to himself, making him believe that he is his own creator: a belief that has transformed guilt into sin, and pain into remorse. This nullifies the tragic (Kierkegaard 1959 [1843], 147). Anxiety has replaced it, feeling the entirety of his sorrow at the present moment, and his pain is without meaning. The main consequence is madness:

Anxiety is in this sense a truly tragic category, and the old saying: *quem deus vult perdere, primum dementat*, in truth rightfully applies here (Whom the God would destroy he first makes mad (Kierkegaard 1959 [1843], 152-153).

Both philosophers recognize that man's deepest experience is an experience of chaos, of disunity, which means deep pain and loneliness which can be overcome thorough the transvaluation of values, that is the overman (Nietzsche), or through a leap of faith (Kierkegaard).

Kierkegaard illustrates how the leap of faith saves one from anxiety in his book *Fear and Trembling*. In his poetic philosophical style he evokes Abraham's anxiety, which represents the acceptance of surrender to an unknown will. Abraham's act of trust is the leap of faith thanks to which he conquers what he was afraid to lose: Isaac's life. Together with Isaac's life Abraham obtains the deep transformation of his conscience: the unknown becomes the infinite, the experience of nothingness is transformed into the experience of the divine and chaos is now cosmos, universe and firmament. Such a miracle can occur thanks to man's capacity to trust the unknown, that is thanks to a leap of faith. Ontological trust and faith go together: "Yet Abraham believed and did not doubt, he believed the preposterous" (Kierkegaard 1973 [1844], 35). Abraham, Kierkegaard says, was the tragic hero who did not say a word:

He remained true to his love. But he who loves God has no need of tears, no need of admiration, in his love he forgets his suffering, yea, so completely has he forgotten it that afterwards there would not even be the least inkling of his pain if God Himself did not recall it, for God sees in secret and knows the distress and counts the tears and forgets nothing. So either there is a paradox, that the individual as the individual stands in an absolute relation to the absolute/or Abraham is lost (Kierkegaard 1973 [1844], 35).

Faith allows for the formation of the inner relationship grounded on the inner relationship with the Other, bringing feelings of communion with himself and with the Other. At this point the connection between tragic and ontology is clearer. The ontological level, being the place where deep emotions and then deep experience is formed, allows for self-knowledge which brings

inner transformation and the emergence of the spiritual man as opposed to the natural man, and the world as a spiritual entity.

Sophocles in his trilogy showed the process of transformation of the natural man into the spiritual man, from inner disunity to inner unity and to the feeling of communion with the Other. In his first tragedy, he describes the moment in which the natural man, Oedipus the King, confronts his sins. It is a tragic moment in which there is no salvation. Deep emotion characterizes it, for self-knowledge is not gained without deep pain (Sophocles 1941 [456 b.c.]). In the following tragedy, *Oedipus at Colonus*, Sophocles describes the process of inner transformation, so where once there was a guilty man, there is now a transformed man who has accepted his sins and has found the deep meaning of his life. After years of peregrination, Oedipus is ready to find a place that he can call his home. He finds it at Colonus, which is part of Athen's territory. Oedipus dies a member of the Athenian community. Leaving Thebes, he was homeless, as a sign of his guilt, now a re-born man he had a home, a community to which he belonged.

Freud, who more than anybody else has taken into consideration the role of instincts, has described human destiny governed by the laws of nature with the Oedipus myth. Man can be saved from it through culture. Unfortunately, Freud opposes natural man to the rational man (where there was the Id there will be the Ego) and in this way he denies the existence of an ontological drama that man lives beyond the instinctive level (Freud 1989 [1923]).

Jaspers has also devoted a great deal of his philosophical work to the question of the tragic (Jaspers 1953). Through the analysis of Kierkegaard's and Nietzsche's ideas, whom he sees as addressing the same questions and formulating the same view, he underlines the connection between the loss of the tragic and the drama of modern man:

Thus in their basic substance they have in common a historical judgement about their time. They see the impending *nothingness*, but both possess knowledge of the substance of what was lost... [What is lost is] "infinite reflection" through which man can reach the authentic Existence. Modern man is left with a form of reflection that is "reasoning without commitment, ... dissolution of all authority, ...abandonment of all content that gives to thought measure, aim, and meaning; in this way, having become an indifferent game of the intellect and with nothing to restrain it, reason now fills the world with noise and dust (Jaspers 1986 [1883-1969], 42-43).

The tragic, on the contrary, is the ceaseless pursuit of the answers to questions, and such questions, What is man?, What leads him on, What is guilt? What is fate? What are the ordinations valid among men, and where

do they come from? What are the Gods?, are directed to the gods . Such incessant questioning does not make the person merely a spectator, but a man who is personally involved and for this reason he discovers his limits, his responsibility, his guilt and his pain. Tragic knowledge, as Jaspers recognizes, makes man free because he leaps into transcendence where he finds meaning. The primacy of rationality has separated man from his deep roots, where he had to confront pain and disunity, but at the same time he would be involved in a cathartic process that would make him aware of his limits giving him however the possibility to transcend them (Jaspers 1953, 34-36). The process of transcendence is not the result of the work of Gods and of faith, rather the result of the process of self-reflection thanks to which man experiences the deep contradictions of human existence, the antinomies of which human existence is made: between freedom and limits, between choices and constraints.

The loss of the tragic, denounced by both the philosophers means the loss of the ontological experience, that is, the only one that would make him feel that he knows himself. In the process of knowing one's self, of self-discovery he also finds himself. On the contrary, the process of rationalization forces modern man to think only in an instrumental way, searching for rational-technical solutions rather than seeking a reason to exist and a reason to overcome one's self, one's limits. This is his iron cage.

5. MAX WEBER AND THE IRON CAGE: THE PHILOSOPHER STATES THE PROBLEM; THE SOCIOLOGIST MUST FOLLOW THROUGH

Weber, besides being a sociologist, was also an economist, an historian, and a philosopher. He had a deep philosophical view that influenced his sociological view (Jaspers 1965 [1937])⁷. He believed in fact that sociology's main goal is to understand the meaning of social actions given that man's search for meaning is the center of man's existence. Weber analysed the destiny of modern man looking at the process through which meanings are formed. Contrary to Durkheim, he has never defined himself as a positivist; his epistemological interest has been to frame sociology as one of the sciences of the spirit. In order to avoid introspection, he has chosen history as the ground for understanding the origin and the development of the spirit; that is, of that original relationship through which man finds fundamental meaning.

In his book, *The Protestant Ethic and the Spirit of Capitalism*, (1904-

⁷ Jaspers was a good friend of Weber. At Weber's death he wrote a necrology in which he underlined Weber's philosophical attitudes (Jaspers, 1989).

1905), Weber analyzes the existential condition of modern man in the early phase of capitalism. He links the origin of capitalism and its early development to the development of the Spirit of Capitalism. He defines it a rational conduct of life that assumes the nature of a vocation. The historical reason for the formation of this type of personality is the rise of the Protestant Ethic (Weber 2002 [1904-1905]). In his book *Max Weber and Thomas Mann*, Goldman maintains that for Weber and for Mann the idea of “a calling” is central to understanding the formation of the “occidental personality” (1988, 4). Both authors went back to the original idea of “a calling” as work done to serve God, and they thought that it was this idea that gave the first generation of capitalists the meaning of their existence.

With the development of the process of rationalization, however, the inner worldly ethic loses its original meaning concerned with the question of salvation, because the instrumental reason becomes dominant, completely separate from the fundamental questions. This has also implied a process of disenchantment that has replaced the meaning of calling in service to God to the secularized notion of work causing a transformation in both individual and collective life. It has caused the loss of meaning and the spread of nihilism (Goldman 1988, 2).

Thomas Mann in his novel *Buddenbrooks* describes the transformation that occurred from the first generation of capitalists to the third⁸. The founder of the dynasty was primarily a man of faith and secondarily a capitalist, while his grandson, Thomas, the last capitalist of the family, loses his faith and consequently his role as capitalist does not give him any reason to live. Mann describes Thomas as a man divided between his narcissism, which causes him to give importance to the material symbols of his wealth, and his nihilism, which leads him to find solace in Schopenhauer’s philosophy. The capitalist who found meaning in life seeing his work as a vocation is dead and by the third generation has been replaced by a divided man who even though haunted by nihilism struggles to accept it as his only creed. However, he knows that such a struggle is in vain because emptiness is his new dimension:

⁸ Harvey Goldman in his book on *Max Weber and Thomas Mann* justifies the comparison of the work of a sociologist and a writer in the following way: ‘We are accustomed to seeing the discourse of social science and literature as quite distinct, concerned in different ways with different issues of “outer” world and “inner” world, the one focusing on explaining empirical “reality”, the other on “fictional” explorations or representations of themes from that reality. But this distinction is unfortunate and artificial, especially for an approach to social science that is interpretative rather than causal in its orientation. Such an approach must rely on a broader range of cultural experience and expression and a wider set of themes to do its work’. (1988, 16).

In his hours of gloom- and they were frequent-Thomas Buddenbrooks would ask himself what sort of man he really was and what could still justify his seeing himself as something better than any of his simple-hearted, plodding, and small-minded fellow citizens. The imaginative élan and cheerful idealism of youth were gone. To play at work, to work at play, to strive, to direct one's self-serious, half-whimsical ambition toward goals to which one ascribes only symbolic value – that requires a great deal of vigour, humour, and a breezy kind of courage for debonair, sceptical compromises and ingenious half-measures; but Thomas Buddenbrooks felt indescribably weary and listless... Because, as soon as he began to think of the end of life as something more than a distant, theoretical, and minor necessity and regarded it, instead, as imminent and tangible, as something for which one must make immediate preparations, he began to brood, to search himself, to examine how things stood between him and death and what he thought about matters beyond this earthly life. And at his very first attempt to do so, what he found was hopeless immaturity and a soul unprepared for death....No, when it came to ultimate and highest questions, there was no help from outside - no mediation, no absolution, no soothing consolation...before it was too late, he must either achieve some clear readiness for death, or die in despair (Mann 1993 [1901], 593, 631-632).

Thomas Buddenbrooks' loneliness is so deep because there are no longer any shared values and consequently each person is imprisoned within his own walls. Even a relationship with his wife and son is prevented by the fact that neither shares the values in which he has grown up: "earnest, profound, remorseless, to the point of self-flagellation" (Mann 1993 [1901], 632). The difference between Thomas's values and those of his wife and son reflects the discrepancy in Thomas' conscience between the world of his ancestors based on *Beruf*, i.e. hard work and accumulation in the hope of salvation, and his inner world which by now is very unstable because it is no longer connected to any belief or *Weltanschauung*.

The decadence from the first to the last generation becomes very clear in Hanno, Thomas's son. Hanno is reminiscent of the romantic heroes of late XIX century and beginning XX century; for them sensitivity is all they have, and for this reason it has become a cause of weakness rather than a force of inspiration. Mann, influenced by Goethe, portrays Hanno as a person sick in his spirit, unable to find a place in this world, as the following words show:

I just want to go to sleep and not have to deal with it. I want to die, Kai! No, I won't amount to anything. I can't even bring myself to want anything. I do not want to be famous. The idea scares me, as if it meant doing something wrong (Mann 1993 [1901], 636).

Hanno may represent the man of late modernity whose crisis of identity reflects the crisis of values of the nation. This is pointed out by Weber and Mann as well. They believe that the existential crisis of the individual and the crisis of values of a nation go together; one recalls the other, in other words they are dialectically related. For instance, values for Weber are collectively defined, however it is the individual conscience that will choose which values to make his own. Neither of them, society or individual, can do without the other.

With the decline of consciousness of the bourgeois of the first generation, the man of virtue, the heirs confront meaninglessness because in a materialistic culture stultification takes the place of the existential inner dialogue for the search for meaning. In his essay *Science as vocation*, Weber underlines the drama of modern man: the inability to face the profound questions of existence: life and death:

Now, this process of disenchantment, which has continued to exist in Occidental culture for millennia, and, in general, this "process," to which science belongs as a link and motive force, do they have any meanings that go beyond the purely practical and technical? One will find this question arise in the most principled form in the works of Leo Tolstoy. He came to raise the question in a peculiar way; all his broodings increasingly revolved around the problem of whether or not death is a meaningful phenomenon. His answer was: for civilized man death has no meaning (Weber 1994 [1918], 286-287).

Modern man is caught in a crisis of meaning, this includes death. The end of modern man's existence will not coincide with the peak of his wisdom; on the contrary it will coincide with the collapse of all his certainties and the bitter experience of not leaving any sign behind because, after all, most discoveries are temporary. Contemporary man is in fact caught within the process of technological change which makes each discovery a precarious result, thus also making existence itself obsolete overall (Weber 1994 [1918], 287).

Weber clarifies this point when he compares modern man to Abraham, who, on the contrary, could see the meaning of his death and therefore of his existence:

Abraham, or some peasant of the past, died "old and satiated with life", in terms of its meaning and on the eve of his days, had given to him what life had to offer; because for him there remained no puzzles he might wish to solve; and therefore he could have had "enough" of life. Whereas civilized man, placed in the midst of the continuous enrichment of culture by ideas, knowledge, and problems, may become "tired of life" but not "satisfied with life". He catches only the most minute part of what the life of the spirit brings

forth ever anew, and what he seizes is always something provisional and not definitive, and therefore death for him is a meaningless occurrence. And because death is meaningless, civilized life as such is meaningless; by its very "progressiveness" it gives death the imprint of meaninglessness (Weber 1994 [1918], 287).

Weber's denouncement of the iron cage in which modern man would be forced to live is also a denouncement of the formation of the mass man; a man who has lost a separate destiny, who has been deprived of his own particular drama, whose conscience is dominated by ideology and who is fearful to face life as an individual on his own.

The loss of meaning is not only a drama for the individual; it is also a drama for society which is transformed into a dehumanized machine whose goal of efficiency can see the extermination of a race as a technical task. Bauman in his book *Modernity and Holocaust* (2001) maintains that the Shoah has been possible because of the efficiency of the German bureaucracy. Furthermore, the search for meaning was twisted into nationalism and the ideology of the supremacy of the race, which both found their main expression in the religion of death. Death of the enemy, both outside the country and inside the country. The connection with the transcendental was thus replaced by the values promulgated from the religion of death: war, violence and aggression.

6. BEYOND NIHILISM: LOOKING FOR A REASON TO EXIST

If we draw conclusions from the ideas advanced by the authors I have analyzed in the previous sections, we see that all of them conceive of a strong subject that can bring about cultural renewal: a man of faith for Kierkegaard; a man able to go beyond his time and his limits (overman) for Nietzsche; a tragic man who centres his existence on 'infinite reflection' for Jaspers; a charismatic leader capable of bringing new values and, then meanings for Weber, a man who has man as his main value, for Durkheim.

All these ideal types have one trait in common: inner trust (ontological trust) and the need to find new values that allow modern man to go beyond nihilism. In fact, for Kierkegaard, Abraham is a man of faith because he has been able to trust God; Nietzsche also evokes trust when he reclaims the human above all: man as the highest value, and most of all, man in search of himself ("you sought the heaviest burden and you found yourself- it is a burden you cannot throw off..."), who for Jaspers, becomes a man of infinite reflection through which he reaches authentic Existence. Weber translates philosophical ideas into a sociological view, so the solitary and self-

reflective man of Kierkegaard, Nietzsche and Jaspers, becomes the charismatic leader, who announces new values and with them a new culture is created that will give a meaning to life again. The same is true for the man who believes in the religion of the individual, which implies a trust in Man, therefore he must find trust in himself.

The belief in ontological trust has replaced the belief in progress. Neither the sociologists nor philosophers, that I have considered, believe blindly in progress, the myth of modernity. All of them see and denounce that technological discoveries and rationalization cause problems in man's existence as well as in society. Weber, for instance, denounces the danger of being trapped in an iron cage because the needs of social organization have become stronger than man's individual needs. The domination of instrumental reason has forced man to live in a deserted land, where the seeds of inner life have been eradicated. Durkheim has interpreted the same loss in terms of moral disorientation, which recalls Kierkegaard's claim of anxiety as the result of absence of the inner relationship of the "I" with the "I"⁹, only possible in the presence of a relationship with the transcendental. Finally, Nietzsche's idea of eternal present expresses the same denial of progress and change.

Nietzsche, in particular, is one of the first philosophers who, contrary to Hegel, refused the teleological idea of history and substituted the idea of the necessity of a continuous confrontation with the roots, the essence of human nature, in order to find those values, those aims that could take man beyond himself. Zarathustra is the symbol of such a man, able to go beyond himself; not super man, then, but "the higher man", the man who strives for transformation. For Kierkegaard too, it is not progress that brings freedom, but the possibility for man to choose among the infinite possibilities. Freedom in fact is an existential condition besides being a political one. The man who confronts infinite possibilities and is able to overcome the anxiety that the choice implies is the man with a strong subjectivity. As explained by Jaspers the condition of having infinite possibilities can also bring illness rather than freedom. For the individual to feel free in the face of infinite possibilities it is necessary to be able to establish a strong relationship with himself based on a dialogue with the ultimate values. This forms a link between the inner and the outer world, which cannot be accomplished without the development of a feeling of belonging that is a feeling of communion within and with the world.

On the relationship between the inner and the outer world, I find Jasper's reflections on guilt particularly illuminating. Guilt is the other face of anxie-

⁹ Kierkegaard maintains that inner unity is the result of the formation of the I with the I, which can be formed only through the relationship with God. It is this relationship that forms the spiritual man (1973).

ty. It is, like anxiety, an ontological and a tragic category, as Sophocles has so brilliantly shown in *Oedipus the King*. It becomes dominant when trust/faith is lacking which causes the death of the soul, as Kierkegaard argues in his work *The Sickness unto Death* (1973 [1844]). Guilt is present when there is the death of the soul. In other words, when there is no internal relationship of the I with the I, which, for Kierkegaard, is possible only if there is also a relationship with God/transcendental. Man naturally is in a state of disunity, perceived as sin and its arising guilt.

Nietzsche also gives great importance to guilt seen as the cause of the divided conscience of the Christian man. For the German philosopher, the Christian emphasis on guilt has imprisoned man, preventing him to live life fully. The man of yes should supersede the guilty man.

Jaspers went beyond the analysis of Kierkegaard and Nietzsche, considering *The Question of German Guilt* (2001 [1947]). His first statement is: "No one is guiltless" (Jaspers 2001 [1947], 16), then he moves on to enquire about guilt, which means responsibility, individual and collective responsibility. He recognizes that the main problem is "that so many people do not really want to think [...]" (Jaspers 2001[1947], 16). To think is to deal with guilt: "for only consciousness of guilt leads to the consciousness of solidarity and co-responsibility without which there can be no liberty" (Jaspers 2001 [1947], 114-115). The process of self-reflection should be carried on at both individual and collective levels. Even though the two are different, the latter can occur only by way of the former because a real metamorphosis can occur in the individual, in many individuals independent of or mutually inspiring one another (Jaspers, 2001 [1947], 96).

A self-reflective man is not then an egoist, but a man who feels responsible for all his actions, and sees purification from guilt as "an inner process which is never ending but in which we continually become ourselves. Purification is a matter of freedom [...] the premise of our political liberty" (Jaspers 2001 [1947], 114). The formation of the subject thus implies a person capable of assuming the responsibility of freedom, conceived as the freedom to build his own existence, recognizing the consequences of his actions, which are his choices. This means not only the formation of a free and responsible man but also of a responsible citizen: "For only the pure soul can truthfully live in this tension: to know about possible ruin and still remain tirelessly active for all that is possible in the world" (Jaspers 2001 [1947], 116).

The loss of meaning caused by a culture that puts emphasis only on materialistic needs and the struggle for survival is then the result of a deep inner split between feelings and reason¹⁰. Such division means the transformation

¹⁰ Richard Sennet speaks in fact of an inner split between the self and the I that characterizes

of the ontological level from the siege of emotions and meanings into a reservoir of chaotic feelings that the individual is unable to control. The expression “the gods have become illness”, uttered by the Swiss psychiatrist and psychoanalyst C.G.Jung, means precisely the inability of the individual to control and to live meaningfully with his feelings.

To free modern man from his illness means to free him from solitude making him experience the inner unity and the outer community so that feelings can become links, ties, and meanings. This means the creation of a society able to recognize that the individual has both material and spiritual needs, and to accept that the second is not secondary to the first (Weil 1990 [1949]). Furthermore, it implies the recognition that new values, and with them a new culture, can be formed only by the individual consciousness. It is not social struggles, war, class struggle that can save us from the iron cage or the desert in which we live. Furthermore, in times of uncertainty and wars all over the planet, the question of guilt (everybody is guilty) is a standing question.

7. THE NEED FOR SUBJECTIVITY IN TIMES OF UNCERTAINTY AND THE DEATH OF SOCIETY

Anthony Giddens and Alain Touraine, following Durkheim and Weber, have re-proposed the need to find meaning as the way of overcoming man’s social existential condition of uncertainty. Both sociologists see a solution in the development of subjectivity and in the formation of a strong identity rather than in a collective struggle. They are aware that it is not possible to go back to a society where community can replace radical individualism and a collective struggle can defeat free competition. They are also aware that the new social condition exposes the individual not only to loneliness, to the feeling of being up-rooted, but also to the problem of a profound disconnectedness that is the cause of widespread individual and social pathologies (Graziosi 2015). Finally they are aware that Durkheim’s theory of the formation of a new religion has not taken place, while Weber’s theory of the iron cage is more and more present. Even though they share the view of social change, they give slightly different interpretations of subjectivity.

Giddens believes that subjectivity can be formed only in the presence of ontological trust. He stated so openly (1991), however he does not believe that ontological trust can derive from faith, as for instance Kierkegaard believed, or from inner dialogue with ultimate values, as Weber thought. His

the personality of contemporary man forced to be flexible by the requests of the market economy (1999).

answer is secular, more precisely psychological. He relies in fact on Peter Laing's existential view of schizophrenia.

In his analysis of schizophrenia, the Scottish psychiatrist recognizes ontological trust as the necessary condition for the development of a healthy personality. He defines ontological trust as the feeling of being an entity that exists in time and has a place in space. This condition is what allows a person to be ontologically born, that is, a presence in the world. Without ontological trust the person does not have a strong identity and therefore he will never achieve the secure autonomy necessary for internal coherence and to form a relationship between the body and the soul (Laing 1990 [1960]).

Sharing Laing's view, Giddens maintains that once there is ontological trust a strong identity can be formed through self-reflection. This allows to recognize a pattern that ties his life together thus gives meaning and coherence to his existence. Contrary to previous society, identity is not formed by the internalization of social roles, nor is it stable over time (Mead 1934), but is the result of a narrative constructed by the individual himself reflecting on the events of his life, finding a continuous thread that gives them a meaning (Cavarero 1997). For Giddens, subjectivity coincides with the activity of self-reflection. It is Touraine who gives a broader view.

For Touraine, the main social change is the death of society, that is the absence of strong social ties, strong institutions and a system of collective values that characterized the previous stages of modernity. Subjectivity is the way the individual can face the death of society, which however for him can be developed not thanks to faith but through a process of self-reflection that expands consciousness and allows for the formation of the ethic of responsibility toward the other. With respect to this latter aspect, Touraine goes back to Weber's idea. Weber was the first to speak of the need for modern man to develop the ethic of responsibility in face of the growing individualism. Ethics has its roots in the individual consciousness, while morality has them in the collective consciousness present only if society is strong. Touraine believes that such a result can be achieved thanks to the new culture that is emerging with minority movements, in particular with the enhancement of women's culture (Touraine 2004).

8. CONCLUSIONS

The main result of the dialogue between philosophy and sociology is the recognition that the burden to find meaning, to form a strong identity, to form subjectivity, is on the individual. A responsible and reflexive subject can replace the emptiness left by the death of society.

It is the only way in which the individual can escape nihilism, emptiness,

moral disorientation, all of which cause inner disconnectedness, and to achieve a deep feeling of unity. This social existential condition will allow him to conceive of himself as the agent of his own life and therefore to experience freedom as the will to pursue his goals, without however ignoring the presence of social constraints. As the existentialists J.P. Sartre e S. de Beauvoir maintain, freedom is an ontological aspect and it can be exercised, that is have a real experience of it, conceiving existence as a project (Graziosi 2017).

The reiteration of the importance of the ontological level by sociologists is then mainly due to the new social-existential conditions in which the individual can no longer count on collective agents for reaching a better position but must confront the growth of inequality, the growth of alienation by himself and find the solution in himself. The doubt remains that to build a strong subjectivity is a privilege for an elite and not for everyone. It is possible that, instead, the future will be a repetition of the past, with the masses becoming the protagonist of the revival of populism, going even so far as to pursue authoritarian solutions. Nevertheless, there is always hope that those who are able to form a strong subjectivity will denounce the manipulation of the masses and work for a culture that increasingly favours the formation of subjects, that is, free responsible individuals.

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TECHNOLOGICAL UNEMPLOYMENT. A BRIEF HISTORY OF AN IDEA

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ABSTRACT

This article traces a brief history of a particularly relevant concept in political economy and economic sociology: technological unemployment. The historical narration aims at covering four centuries, since the beginning of the industrial revolution up to the present. As a consequence, it has to be highly selective. It is mainly based on sources in the English language and refers only to a few of the many social scientists involved in the debate. The scopes of the inquiry are essentially two. The first is to show that focusing on technological unemployment as an idea – and not simply as a phenomenon – is appropriate, because of the high level of controversy that still characterizes the debate. The second is to drive attention to a concept that could be extremely useful to understand the technological and societal changes occurring in the twenty-first century.¹¹

1. GENERALITIES

The concept of technological unemployment is regaining momentum in the discourse of economists and economic sociologists. However, when analyzing the debate, what is most surprising is the substantial absence of agreement on the very existence of technological unemployment as a phenomenon. Some observers present technological unemployment as a sprawling monster that is completely subverting the global economy, while others conclude that this picture is just a mirage of doomsayers. Since reputable scholars are engaged in the debate, we cannot simply blame the polarization of narratives on the incompetence of one or the other school of thought. Even if the definitions of technological unemployment provided by different sources do not differ particularly, it has become evident that the terms contained in these definitions may assume different meanings depend-

¹¹ Prior to publication in this journal, this article was deposited in the repository of the International Sociological Association: *ISA eSymposium for Sociology*, Vol. 7, Issue 1, 2017: 1-16. Available at: <http://www.sagepub.net/isa/admin/viewEBPDF.aspx?&art=EBul-Campa-Mar2017.pdf>

ing on the theoretical perspective.

Unemployment is a phenomenon studied by both sociologists and economists. As Tony Elger (2006: 643) remarks, “[s]ociologists often focus on the experience and consequences of unemployment, leaving economists to analyze causes. [...] However, consideration of the underlying processes that generate these patterns of unemployment exposes continuing controversy among economists, for example between neoliberal, neo-Keynesian, and neo-Marxist analyses of the political economy of contemporary capitalism. Thus, economic sociologists have to adjudicate between these different causal accounts [...]”

Unemployment is a complex phenomenon. “Economists distinguish between frictional unemployment, involving individual mobility of workers between jobs; structural unemployment, resulting from the decline of particular sectors or occupations; and cyclical unemployment, resulting from general but temporary falls in economic activity” (ibid.). To this list, one can add technological unemployment.

The Oxford Dictionary of Economics defines technological unemployment as follows: “Unemployment due to technical progress. This applies to particular types of workers whose skill is made redundant because of changes in methods of production, usually by substituting machines for their services. Technical progress does not necessarily lead to a rise in overall unemployment” (Black 2012: 405). As one can see, it is a concept that already includes a theory, since it puts into causal relationship two distinct phenomena: technological progress and unemployment. The disagreement between the different schools of thought mainly concerns the existence of this causal relationship.

Technological unemployment can be studied at different levels of the economic system: at the level of individual actors, companies, productive sectors, countries, or global economy. That at least *one individual* has lost his job because the employer or the customer has purchased a machine that can accurately perform his/her duties is a fact that can hardly be denied. Similarly, it cannot be denied that entire companies have been automated and this process has resulted in a drastic reduction of employment *inside the company*. As well as it cannot be denied that, owing to technological innovation, *entire economic sectors* have been largely emptied of their workforce. The transition from traditional agriculture to intensive agriculture, through the use of agricultural machinery, herbicides, fertilizers, fungicides, etc., has led to demographic emptying of the countryside. The evaporation of jobs in the primary sector of the United States of America offers impressive numbers: in 1900 41% of the population was employed in agriculture, a century later, in 2000, only 2% of Americans still worked in same sector (Wladawsky-Berger 2015). A similar phenomenon was observed in the sec-

ondary sector, or manufacturing, at the turn of the twentieth and twenty-first century. In the United States, the ratio between employment in the factories decreased from 22.5% in 1980 to 10% today and is expected further decline to below 3% by 2030 (Carboni 2015). Similar situations can be observed in other industrialized countries, including Italy (Campa 2014a).

This emptying of whole sectors of the economy was accompanied by a *migration* of the workforce from one sector to another. A first migration was observed from agriculture to manufacturing, a visible phenomenon because it also led to a massive migration from rural to urban areas. A second migration of the labor force, less visible but equally significant, occurred from the manufacturing sector to the services sector (Campa 2007). Overall, at least so far, the increase in productivity in individual sectors has not resulted in the emergence of a permanent and chronic technological unemployment on a global level. This does not mean, however, that technological unemployment – at least as a temporary or local phenomenon – does not exist.

It should also be clear that the reabsorption of the unemployed into the economy has been possible thanks to two main levers: the first is *free market*, which enabled the birth and development of new sectors of the economy; the second is social and industrial *public policies*. The fact that both forces are at work is often obscured by the fact that observers are largely divided into two tribes: those who worship the Market as an almighty God, and those who attribute an analogous divine character to the State. Only those who do not profess either ‘religion’ can see that many factors have contributed to dampen the phenomenon of technological unemployment. Private entrepreneurs have created manufacturing industries and used the cheap labor flowing from countryside to city, in the nineteenth and early twentieth century. New enterprising capitalists have created service companies to redeploy manpower pouring out from factories, in the second half of the twentieth century. At the same time, trade unions and socialist political parties, through tough political and labor struggles, have succeeded in achieving steady reduction of working hours (even a halving of working hours, if we consider the period from the nineteenth century to the present), retirement and disability pensions, paid holidays, paid sickness, maternity leave, and other social rights, which on the whole have forced private employers to hire more workers than they would have hired in a laissez-faire capitalist regime.

Moreover, the idea that the equilibrium of a national economy is assured by the Invisible Hand is belied by the fact that employment crises have sometimes been resolved by the mass migration of workers from one country to another. This means that it is not written in the stars that capable private entrepreneurs and creative people who create new jobs, new companies, or even new economic sectors must continually rise. If they do not rise, if there

are no social and cultural conditions that permit them to arise, the unemployment crisis generated by the introduction of new technologies can become chronic and irreversible in a specific geographical area. Finally, other forms of public intervention, such as industrial policies, have contributed to cushion the phenomenon. For instance, the creation of public manufactories, the nationalization of private companies, public contracts (just think of the incidence of military spending in the United States), wars, crime (the prison population in the US now exceeds two million individuals), as well as the creation of millions of jobs in the public service – jobs that are sometimes unnecessary and therefore constitute a permanent masked dole.

If you consider all these aspects, some of which are ignored by economic theory, it seems difficult to deny the existence of technological unemployment. Somewhat different is the question of whether it is a significant phenomenon on a global scale. From the psychological point of view, being replaced by a machine is certainly a big concern for those who lose their jobs, even temporarily. But the issue begins to acquire political relevance only if the proportion of individuals affected by the phenomenon is likely to disrupt an entire economic system. Throughout history, different moments when the phenomenon of technological unemployment has assumed critical proportions were observed. In these periods, the idea of technological unemployment has gained major relevance in the public debate.

2. LUDDISM: THE FIRST REACTION

Notoriously, a rather critical moment in European history was the transition from feudalism to capitalism, and not only for bloody political revolutions that accompanied the transformation. In the so-called feudal system, the creation of work did not constitute *a problem*, because social mobility was minimal. Children inherited the job of their fathers. The children of the farmers knew that they would be farmers themselves, or serfs. The children of the artisans learned their profession in the workshops of their fathers. The eldest son of an aristocratic family inherited the family estate, while his younger brothers were initiated in a military or ecclesiastical career. Daughters would be wives of men chosen by the father, or nuns. Beggars, robbers, vagabonds, prostitutes, and adventurers formed exceptions to the strict rule. In the Middle Ages, others were the economic concerns: wars, epidemics, famines. A serious problem that could arise was rather labor shortages as a result of these phenomena.

With the transition to capitalism, previously unknown problems arise: in particular, overproduction and unemployment. The introduction of machines in the production system and social mobility disrupt the traditional concep-

tion of work and life. To many, it appears inconceivable that someone willing to work cannot find a job. So much so that the first reaction of the political authorities is to limit the use of the machines where cause unemployment. Even mercantilist Jean-Baptiste Colbert, who gave great impulse to the industrialization of France by the creation of so-called *Manufactures nationales*, passed measures to restrict the use of machines in private companies.

Where the authorities do not intervene, the workers themselves may make a fierce and desperate struggle against the machine, of which we find a detailed account in *Capital* by Karl Marx (1976: 554-555): "In the seventeenth century nearly all Europe experienced workers' revolts against the ribbon-loom, a machine for weaving ribbons and lace trimmings called in Germany *Bandmühle*, *Schnurmühle*, or *Mühlenstuhl*. In the 1630s, a wind-driven sawmill, erected near London by a Dutchman, succumbed to the rage of the mob. Even as late as the beginning of the eighteenth century, saw-mills driven by water overcame the opposition of the people only with great difficulty, supported as this opposition was by Parliament. No sooner had Everett constructed the first woolshearing machine to be driven by water-power (1758) than it was set on fire by 100,000 people who had been thrown out of work. Fifty thousand workers, who had previously lived by carding wool, petitioned Parliament against Arkwright's scribbling mills and carding engines. The large-scale destruction of machinery which occurred in the English manufacturing districts during the first fifteen years of the nineteenth century, largely as a result of the employment of the power-loom; and known as the Luddite movement, gave the anti-Jacobin government, composed of such people as Sidmouth and Castlereagh, a pretext for the most violent and reactionary measures. It took both time and experience before the workers learnt to distinguish between machinery and its employment by capital, and therefore to transfer their attacks from the material instruments of production to the form of society which utilizes those instruments."

David F. Noble (1995: 3-23) maintains that the Luddites are not to be considered technophobic. When the machinery was introduced in manufactures, the workers destroyed it because of necessity, not because of technophobia. Their choice was limited to three options: 1) starvation for them and their families; 2) violence against the uncompassionate owners of the means of production; 3) destruction of the means of production. Choosing the third option was the mildest way to communicate their discomfort as regards unemployment.

The reaction of the political authorities was clearly less mild. Such was the incidence of the phenomenon that the English government implemented the death penalty for Luddites. The 'assassination' of a machine was put on a par with the assassination of a human being.

3. CLASSICAL POLITICAL ECONOMY: THE FIRST DENIAL

In spite of the fact that the appearance of machinery produces worrisome social disorders, economists are reluctant to modify their theories in order to make place for technological unemployment. There are just a few exceptions. For instance, an attempt at conceptualization is found in James Steuart's book *An Inquiry into the Principles of Political Economy* (1767), and precisely in chapter XIX ("Is the Introduction of Machines into Manufactures prejudicial to the Interest of a State, or hurtful to Population?"). Steuart admits that the sudden mechanization of a segment of the production can produce temporary unemployment and, therefore, public policies are needed to facilitate the absorption of the labor force into other tasks. He is still persuaded that the advantages of mechanization outweigh negative side effects, but is also convinced that problems do not solve themselves. However, that of Steuart is an isolated voice.

Classical economics is dominated by Adam Smith's optimistic perspective, which emphasizes the positive effects of mechanization and the self-regulating nature of market economies. In his masterpiece *An Inquiry into the Nature and Causes of the Wealth of Nations*, he provides evidence of a causal connection between high taxation and unemployment (Smith 1998: 1104), or excessive prodigality of the landlords and unemployment (Smith 1998: 448-449), rather than between the use of machinery and unemployment. Machinery is mainly seen as a means to increase the productivity of laborers: "The annual produce of the land and labour of any nation can be increased in its value by no other means but by increasing either the number of its productive labourers, or the productive powers of those labourers who had before been employed. [...] The productive powers of the same number of labourers cannot be increased, but in consequence either of some addition and improvement to those machines and instruments which facilitate and abridge labour; or of a more proper division and distribution of employment" (Smith 1998: 455-456).

When Smith takes into consideration the possibility of a connection between the mechanization of labor and the redundancy of laborers, he sees this situation uniquely as a chance for capitalists and landlords, and not as a problem for the working class: "In consequence of better machinery, of greater dexterity, and of a more proper division and distribution of work, all of which are the natural effects of improvement, a much smaller quantity of labour becomes requisite for executing any particular piece of work, and though, in consequence of the flourishing circumstances of the society, the real price of labour should rise very considerably, yet the great diminution of the quantity will generally much more than compensate the greatest rise which can happen in the price" (Smith 1998: 338).

Afterwards, classical economists developed “the theory that the working class is being compensated for initial sufferings, incident to the introduction of a labor-saving machine, by favorable ulterior effects” (Schumpeter 2006: 652).

Marx baptizes this theory as *theory of compensation*. Among the fathers of the theory, Marx lists James Mill, John McCulloch, Robert Torrens, Nassau W. Senior, and John Stuart Mill. David Ricardo should also be added to the list. In synthesis, this theory states that, if new machines allow to save labor, manpower will be needed for the production of said machinery. Also, if initially the new production processes saves labor, then they boost demand and jobs, through the reduction of costs and, therefore, the price of the goods offered. Finally, it is hypothesized that there is a perfect identity between income and spending, and therefore the theory assumes that the major revenues arising from the reduction of the workforce in factories and farms will result in greater demand for consumer goods by capitalists and landlords, which in turn will create new jobs.

4. THE CONVERSION OF DAVID RICARDO

If this is so, why do laid-off workers get so angry? Evidently, even admitting that there is a medium-term or long-term compensation of losses, the short-term effects are devastating for a social class that has no capital or assets. For those who live for the day, and perhaps have many children to support, even a few weeks unemployment can be lethal. If we consider that, in order to find a new job, the proletarian must sometimes emigrate, leaving loved places and people, or accept a less satisfying and less remunerated job, while he or she sees his or her former employer getting richer thanks to the new machinery, his or her backlash appears less mysterious.

It is for this reason that the great economist David Ricardo, in 1821, decided to bring the issue of technological unemployment into economic theory. It must be said that, initially, Ricardo not only remained in the wake of classical economics, denying the issue and arguing that the introduction of machinery is beneficial to all social classes, but had also produced what Blaug (1958: 66) has called “the first satisfactory statement of the theory of ‘automatic compensation’.” Subsequently, however, disorienting his own followers, “Ricardo retracted his former opinion on the subject” (Kurz 1984). In the third edition of Ricardo’s *Principles of Political Economy and Taxation*, published in 1821 – and precisely in Chapter XXXI, “On Machinery” – one can indeed find both the admission of the conversion and a clear formulation of the idea of technological unemployment.

Ricardo (1821: 282) states that it is more incumbent on him to declare his

opinions on this question because they have, on further reflection, undergone a considerable change: "Ever since I first turned my attention to questions of political economy, I have been of opinion, that such an application of machinery to any branch of production, as should have the effect of saving labour, was a general good, accompanied only with that portion of inconvenience which in most cases attends the removal of capital and labour from one employment to another."

The English economist proceeds by summarizing the theory of compensation. Afterwards, he states that these "were" his opinions on the matter. More precisely, Ricardo (1821: 283) states that his opinions "continue unaltered, as far as regards the landlord and the capitalist;" but now he is convinced "that the substitution of machinery for human labour, is often very injurious to the interests of the class of labourers."

That this injury concerns both salaries and employment chances is declared a few pages later. First, he provides examples based on numbers. Then, he concludes as follows: "All I wish to prove, is, that the discovery and use of machinery may be attended with a diminution of gross produce; and whenever that is the case, it will be injurious to the labouring class, as some of their number will be thrown out of employment, and population will become redundant, compared with the funds which are to employ it" (Ricardo 1821: 286). Historians of economics often underline the importance of this step. For instance, Heinz D. Kurz (1984) concludes that, thanks to Ricardo, the idea of technological unemployment "marks its first appearance in respectable economic literature."

As we have seen, the Luddites had denounced this problem much earlier, but not until Ricardian economic theory did technological unemployment take on the aura of a scientific concept. After Ricardo, classical economists were obliged to refute the most simplistic forms of compensation theory and to develop more sophisticated forms of it.

In his 1848 *Principles of Political Economy*, John Stuart Mill (2009: 51) states that "[a]ll attempts to make out that the laboring-classes as a collective body *can not* suffer temporarily by the introduction of machinery, or by the sinking of capital in permanent improvements, are, I conceive, necessarily fallacious." He stresses that it is "obvious to common sense" and also "generally admitted" that workers would suffer in the particular department of industry to which the change applies. However, he still concludes that, at least in opulent countries, the extension of machinery is not detrimental but beneficial to laborers. In his words, "the conversion of circulating capital into fixed, whether by railways, or manufactories, or ships, or machinery, or canals, or mines, or works of drainage and irrigation, is not likely, in any rich country, to diminish the gross produce or the amount of employment for labor" (Stuart Mill 2009: 252).

5. KARL MARX: BEYOND THE ECONOMIC THEORY

The subtitle of Karl Marx's *Capital* is *A Critique of Political Economy*. As a consequence, to label "political economy" his own scientific work would imply some degree of intellectual violence. It is also true that no discipline can easily describe his theoretical and empirical contributions to social science. Besides being considered a philosopher, a political thinker, an historian and an economist, Marx has been also described as a sociologist (Lefebvre 1982, Durand 1995) and, more specifically, as an *economic sociologist* (Swedberg 1987: 22-24). This characterization is particularly appropriate when talking about technological unemployment.

Economic sociology and political economy are two mutually enriching disciplines, differing in a few important respects (Smelser 1976). One of these is the range of the analysis. The former offers a holistic point of view, by paying attention also to cultural determinants, emotional dimensions, and social consequences of economic phenomena. Economists ask themselves if there is a causal connection between technological development and unemployment, in the short or the long run. Economic sociologists aim also at knowing the life conditions of workers inside and outside the factory, that is: if they work safely or unsafely, if they are mobbed when employed, if they abuse alcohol or fall into depression when unemployed, how and where their family live, how many children they have, if their children go to school, if they were forced to migrate, etc.

When we read the chapter on "Machinery and Large-Scale Industry" of *Capital*, we find much information that we can hardly find in a book of political economy. Here is just an example: "Here we shall merely allude to the material conditions under which factory labour is performed. Every sense organ is injured by the artificially high temperatures, by the dust-laden atmosphere, by the deafening noise, not to mention the danger to life and limb among machines which are so closely crowded together, a danger which, with the regularity of the seasons, produces its list of those killed and wounded in the industrial battle" (Marx 1976: 552).

Unlike the economist of his time, who would just deal with laws and regulations by assuming that they are respected and, therefore, constitute a solid basis for predictive theories, Marx takes into account also the possibility that laws and regulations may remain just on paper and never affect real factory life. This is the typical sociological point of view. For instance, Marx (1976: 552) notes that "although it is strictly forbidden in many, nay in most factories, that machinery should be cleaned while in motion, it is nevertheless the constant practice in most, if not in all, that the workpeople do, unproved, pick out waste, wipe rollers and wheels, etc., while their frames are in motion. Thus from this cause only, 906 accidents have occurred during the six

months...”

Coming to the problem of unemployment, Marx observes that machinery has not freed man from work and guaranteed widespread well-being as the utopians promised. It has rather caused the loss of any source of income for part of the working class and the inhuman exploitation of those who remained employed in the factory. This is because, by simplifying and easing the physical work, machinery allowed physically stronger adult males to be replaced by women and children. The benefit to the owners of the means of production was threefold: less labor required; lower cost of labor because women and children were considered lower rank workers; and indefinite time extension of work, because the natural physical fatigue of workers was no longer an obstacle to it. The result was the unemployment and brutishness of adult males, who remained at home to laze around or get drunk, while their relatives were buried alive in the factories.

Not without sarcasm, Marx (1976: 557) notes that “[i]t is supposed to be a great consolation to the pauperized workers that, firstly, their sufferings are only temporary (‘a temporary inconvenience’) and, secondly, machinery only gradually seizes control of the whole of a given field of production, so that the extent and the intensity of its destructive effect is diminished. The first consolation cancels out the second.”

No wonder then that Marx (1976: 565) praises Ricardo for his “scientific impartiality and love of truth.” Similarly, Lowe (1954: 142) will characterize the chapter “On Machinery” by Ricardo as “a rare case of self-destructive intellectual honesty.” The debate on the scientific legitimacy of the concept, however, did not end after Ricardo and Marx.

6. THE MARGINALISTS: MATHEMATICS *VERSUS* LUDDITE FALLACY

The birth of neoclassical (or marginalist) economic theory changes the cards on the table. In particular, after the works of Swedish economist Knut Wicksell the concept of technological unemployment enters a crisis and the balance begins to lean again in favor of compensation theory. Wicksell bases his analysis on the law of marginal productivity of factors of production and claims that wages are the key to the problem. According to his theory, there is no direct causal relationship between technological progress and unemployment, because there is another ultimate cause of unemployment. While the expulsion of workers for the implementation of technical innovations creates an increase in labor supply over demand, it is also true that in a free economy the increase in supply leads to a decrease in wages. In turn, the reduction of the remuneration of labor in comparison to that of capital stimulates the demand for labor, for the sectors not yet affected by technological

innovation will find it convenient to absorb the excess labor. In other words, the unemployment rate that remains stable in the medium or long term – the one that really worries people and governments – is not attributable to the increase in productivity caused by technological progress, but eventually to the rigidity of a wage bottom which prevents the reabsorption of workers in less advanced sectors.

Compared to classical economists, the representatives of the marginalist school adopt more sophisticated mathematical tools, such as infinitesimal calculus, and, thanks to the greater professionalization, the concept of marginal utility – which is the basis of their theory – can be accurately and formally defined.

Wicksell was originally a mathematician, and only afterwards entered the field of economics. This is the way he dealt with the problem: “If x and y are the number of labourers per acre on the first and second methods of cultivation respectively, and the productivity function in the one case is $f(x)$ and in the other $\phi(y)$; and if we assume that m acres are cultivated on the first method and n acres on the second, then we must look for the conditions under which the expression

$$mf(x) + n\phi(y)$$

reaches its maximum value if, at the same time,

$$m + n = B$$

and

$$mx + ny = A$$

where B is the number of acres and A the number of labourers available for the industry in question (here agriculture) as a whole. By differentiation and elimination (the partial derivatives of the first expression being put = 0) we can easily obtain the two equations

$$f'(x) = \phi'(y)$$

and

$$f(x) - xf'(x) = \phi(y) - y\phi'(y),$$

of which the former indicates that when the gross product is a maximum the marginal productivity of labour, and therefore wages, will be the same in both types of production, The second equation gives the same condition for rent per acre.

Thus, although at first sight the going-over of some firms to the new method of cultivation seems to diminish the total product, actually the total product is maximized; *but at the same time wages necessarily fall*, so long as we assume that the gross product is less in the estates cultivated by the new method than in those cultivated by the old” (Wicksell 1977: 140).

The idea that the whole debate among theorists of technological unemployment and theorists of automatic compensation could develop only because of the lack of professionalization of nineteenth century economists becomes widely accepted in academia. For instance, Schumpeter (2006: 652) concludes that “[t]he controversy that went on throughout the nineteenth century and beyond, mainly in the form of argument pro and con ‘compensation,’ is dead and buried: as stated above, it vanished from the scene as a better technique filtered into general use which left nothing to disagree about.”

To be precise, the controversy was “dead and buried” only for the economists of the neoclassical school (Montani 1975). For non-orthodox economists, in the folds of the calculations, a bleak thesis (to say the least) was hidden: if the Luddites attributed the ‘fault’ of unemployment to machinery, and Marxists to the capitalist system of exploitation, neoclassical economists unloaded it on workers who were not satisfied to work for a mess of pottage, or on those social democratic governments that imposed a minimum hourly wage so that workers could at least survive.

7. THE KEYNESIANS: TECHNOLOGICAL UNEMPLOYMENT AS FACT

The hegemony of neoclassical economics in academia seemed to be unassailable, when a game changer enters the spotlight: the devastating economic crisis of 1929. A new paradigm, the Keynesian, becomes destined to take stake in political and scientific circles. Challenging the orthodoxy, in a 1930 article published in *The Nation*, John Maynard Keynes reintroduces the concept of technological unemployment in the economic discourse. Quite curiously, he speaks about it as *a new disease*, as if Ricardo and Marx had never discussed the issue before. These are his words: “We are being afflicted with a new disease of which some readers may not yet have heard the name, but of which they will hear a great deal in the years to come – namely, *technological unemployment*. This means unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour. But this is only a temporary phase of maladjustment. All this means in the long run *that mankind is solving its economic problem*” (Keynes 1963: 325).

Keynes is not a pessimist, nor a Luddite. He sees in technological progress a great resource for humanity. He is convinced that technological unemployment is only a temporary illness. This is because he is confident in the possibility of solving the problem with appropriate public policies, starting with a drastic reduction of working hours. In the same article, the English economist forecasts that “in the course of our life” (that is, in the space of a few decades), we will see ongoing social reforms that will lead us to

work three hours a day, five days a week, for a total of fifteen hours per week, at equal income conditions. In short, it seemed reasonable to solve the economic crisis by implementing a simple formula: working less, work for all. That is, by evenly redistributing the benefits of technological progress.

During the Great Depression, other outstanding scholars focus on the problem of technological unemployment. In August 1930s, Paul H. Douglas publishes an article entitled “Technological Unemployment” in the *American Federationist*, but only to say that the introduction of labor-saving improvements cannot cause permanent unemployment. He maintains that we should rather expect an “automatic” absorption into employment of fired workers, because the demand of employers and those workers still employed is destined to grow as a result of the reduction of costs per unit of output due to technological improvement.

One year later, Alvin Hansen responds to Douglas with an article entitled “Institutional Frictions and Technological Unemployment”, appearing in *The Quarterly Journal of Economics* (1931). Here, Hansen accuses Douglas of reviving the old doctrine of J. B. Say, James Mill, and David Ricardo (meaning the first and second editions of the *Principles*), and in particular the grave fallacy of compensation theory.

Quite significantly, Hansen was still not “the American Keynes” in the moment when he published this article. He still defended the orthodox theory in 1937, when he occupied the chair of Political Economy at Harvard University. His conversion to Keynesianism happened later, but here we can see that there was already a convergence on the issue of technological unemployment.

The 1930s polemics does not end here. Gottfried Haberler (1932: 558) immediately takes the defense of Professor Douglas, “for it would be deplorable if an ungrounded hostility and suspicion against technological progress should be aroused or intensified.”

That ‘temporary’ technological unemployment exists seems not in doubt even among defenders of the orthodox theory. The question is if ‘permanent’ technological unemployment does exist. Ten years later, Hans P. Neisser upgrades technological unemployment from concept to theory. Indeed, these two words express a causal relation, and therefore a law. More precisely, Neisser (1942: 50) laments that “the theory of technological unemployment is a stepchild of economic science.” We read the following lines and we understand that, for this scholar, there is perfect adherence between this neglected theory and ‘facts’. Permanent technological unemployment is not only a useful theoretical concept. It is a real phenomenon. Thirteen years after the 1929 crisis, in spite of compensation theory, there are still masses of involuntary unemployed workers: “The facts seem to stand in such blatant contradiction to orthodox doctrine, according to which no ‘permanent’ tech-

nological unemployment is possible, that most American textbooks prefer not to mention the problem itself" (ibid.).

What is more important is that this 'silence' is unprecedented. Neisser reminds the readers also that "[t]he analysis to which Ricardo subjected the displacement of labor by the machine in the last edition of the *Principles* had stimulated a lively discussion among the later classical economists..." (ibid.). The discussion died down because of the rise of neoclassical equilibrium analysis. However, Neisser correctly underlines that this 'silence' concerns only "Anglo-Saxon literature."

Everett Hagen (1942: 553) also remarks that only "[t]wo papers in American economic journals of the past eleven years have address themselves exclusively to the correction of errors in the prevailing analysis of technological unemployment." He means that written by Hansen in 1931 and that published by Neisser in 1942. He recognizes that Neisser makes a "definite contribution," but he also reproaches him for having completely ignored Hansen and for having written an article in the "post-Keynesian period" that fails "to apply to the problem at hand the theory of saving and investment as determinants of employment." Hagen gives himself the task of filling the hole.

Indeed, the debate is much richer than it seems. First of all, it takes place also in books and not only in articles published in economic journals. An example is the book *Value and Capital* by John R. Hicks. The first edition appears in 1939. The second edition is published in 1946 and, afterwards, is reprinted many times. Here the term 'technological unemployment' appears only at page 291, but the concept to which the term refers is discussed also in other parts of the book. The author stresses the fact that technology may produce unemployment only in specific situations, for instance, "that in which the new equipment, which has been produced, is 'labour-saving'; in this case there is a fall in the demand for labour, as a result of the whole process, relatively to the situation which would have arisen if no capital had been accumulated at all." In other words, "there is not necessarily a fall in the demand for labour at all; there will be if early inputs and late inputs of labour are substitutes, but not if they are complementary" (Hicks 1946: 291).

Another book assessing the problem very seriously is *The Path of Economic Growth*, published in 1976 by German economist and sociologist Adolph Lowe. Here the term 'technological unemployment' appears many times throughout the book. Besides, being also a sociologist, Lowe is capable of keeping a distance from main economic schools (neo-classical, neo-Marxian, Keynesian) in order to assess the controversy from a different point of view: "By centering our investigation of the traverse on the compensation of technological unemployment, we emphasize an issue the relevance of which is highly controversial. It has been debated for more than 150 years

and, considering the secular employment trend over this period, it is not surprising that, in the view of the majority of experts, technological unemployment is today regarded as perhaps an occasional irritant but not as an ever-present threat to the stability of the system. Moreover, in the heat of polemics, the arguments on either side have occasionally been overstated. What is still worse, the basic question at issue has been blurred. This question is neither whether, as a rule, nonneutral innovations initially create unemployment (they do) nor whether, given sufficient time, compensation is possible (it certainly is). The question is whether a free market is endowed with a *systematic mechanism that assures compensation within the Marshallian short period*, thus precluding any secondary distortions that could upset dynamic equilibrium” (Lowe 1976: 250).

The literature on the topic appears much richer also if we take into account books and articles written in different languages. For instance, though being a technological optimist, French economist Jean Fourastié wrote much *sur le risque de chômage technologique de masse* (1949, 1954). Given the parameters of this work, however, we decided to limit our analysis to a few contributions in the English language. More details about the debate on technological unemployment in the Anglo-Saxon culture, with particular attention to the interwar period, can be found in the works by Gregory R. Woirol (1996, 2006).

To put it briefly, while marginalist economists keep denying the problem of technological unemployment, Keynesians are sure that the problem exists, but they are also confident that it can be solved with opportune public policies.

8. REAGANOMICS: THE NEW DENIAL

After the Great Depression – which ended many years later thanks to Franklin Delano Roosevelt’s New Deal (according to the Keynesians) or to the Second World War (according to the Austrian School) – it seemed impossible that humankind could return to laissez-faire capitalism. Nonetheless, the return of the neoliberal paradigm was successful, a few decades later, with the landing of Margaret Thatcher to Downing Street in 1979 and Ronald Reagan in the White House in 1981.

What happened next to their policies was not, of course, the end of work, that is the permanent global unemployment of the masses. In spite of the fact that amazing innovations – innovations that in the 1930s belonged only to the sphere of science fiction – have been introduced in the productive system, there are still jobs around. However, it must be adequately stressed that the danger of chronic unemployment has been averted only thanks to the

flexibility of salaries and job market, in full accordance with the theory of marginal analysis.

To give just an example of the new attitude toward automation and unemployment, I will quote some fragments from the article “Does More Technology Create Unemployment?” by R. H. Mabry and A. D. Sharplin, which appeared in 1986. This is the incipit: “Each new generation brings the reemergence of many of the fears of the past, requiring the repetition of old explanations to put them to rest. Today there is a renewed concern that technological advancement may displace much of the manufacturing (and other) work force, creating widespread unemployment, social disruption, and human hardship. For example, in 1983 the Upjohn Institute for Employment Research forecast the existence of 50,000 to 100,000 industrial robots in the United States by 1990, resulting in a net loss of some 100,000 jobs” (Mabry and Sharplin 1986).

The authors intend to refute “all these claims and predictions and the rhetoric that surrounds them.” They call rhetoric the discourse strategy of the Keynesians, but in fact their textual approach to the problem presents also the typical rhetoric of scientific discourse. For instance, they try to present themselves as equidistant from both conservatives and progressives – and therefore somewhat neutral or purely scientific. Indeed, they explicitly distance themselves from “conservative economic thinkers”, who “tend to disparage persons who fear the rapid advance of technology by labeling them ‘Luddites’.” This is said to be a term “both unfair and inaccurate.” However, a few lines below, they seem to justify the characterization of progressives as Luddites. They state that at least “[i]n part, opposition to technology springs simply from a more or less visceral fear of scientism, which is often taken to imply the dehumanization of humankind.”

Again, they try to regain a fair position in the debate by recognizing that “the warnings heard today are thoughtful and well intentioned”, but, in the same sentence, they immediately underline that the theorists of technological unemployment are “often in error or somewhat self-serving.” This narrative implies that the deniers of technological unemployment are not self-serving. After a few sentences aimed at showing a more balanced attitude toward the problem, Mabry and Sharplin simply restate the standard position of orthodox political economy: “Flatly in error are those that predict no more jobs for a very large sector of the population as a result of advancing technology, creating a massive problem of involuntary unemployment. It is not at all clear that a large number of jobs are about to be destroyed; even if they were, such long-run unemployment as would occur would certainly not be involuntary. Rather, it would take the form of even shorter work days, shorter work-weeks, and fewer working members in the family, as it has throughout our history. Some who correctly anticipate that technological change

may produce short-run employment-adjustment problems overstate those problems. They also often fail to mention that the short-run unemployment that occurs is primarily the result of artificial imperfections -- a lack of competition -- in certain labor and product markets.”

Briefly, according to the authors, there is not long-run involuntary unemployment, while short-run unemployment is not caused by technological advancement but by public policies. In a regime of laissez-faire capitalism, people would immediately find new jobs and enjoy technological advances by working less and earning more.

9. ARTIFICIAL INTELLIGENCE: THE SPECTER OF JOBLESS SOCIETY

Has this 1980s prophecy been fulfilled in the following decades? By the end of the twentieth century, a legion of social scientists answers negatively to the question. The specter of a jobless society reappears in books such as *The End of Work* by Jeremy Rifkin (1995), *Progress without People* by David F. Noble (1995), and *Turning Point* by Robert U. Ayres (1998). The alarm takes a larger magnitude if we consider also the publications in other languages. For instance, Italian sociologist Luciano Gallino has written much, in his own mother tongue, about technological unemployment (1998, 2007).

The narrative of this wave of social criticism can be summarized as follows: the introduction of computers and robots in factories and offices, in the last forty years, has led to the enrichment of a minority and the insecurity and impoverishment of the majority. There are still jobs on the market, because machines, at their present stage of development, cannot completely replace labor. They can only complement it. Jobs that do not disappear completely are those involving a physical effort that cannot be defined by a tractable list of rules and, therefore, cannot be easily implemented in a machine, or those that are so humble and low paid that, even when their automation is technically possible, it is still more economical to hire humans. However, it is just a matter of time. In the near future, machines will be able to replace humans in any activity. Therefore, a profound reform of our society is needed and urgently.

Social scientists with this viewpoint have occasionally attracted the accusation of ‘intellectual Luddism.’ A similar accusation could not, however, be raised against a second wave of social criticism arising a few years later, given that its exponents are mainly engineers and computer scientists. An explosion of publications on Artificial Intelligence, seen as the demiurge of a jobless society, takes place after the 2008 financial crises. Authors like Martin Ford (2009, 2015), Erik Brynjolfsson and Andrew McAfee (2012, 2016), Stan Neilson (2011), Jerry Kaplan (2015), just to mention a few, are deeply

convinced that technology is a ‘good thing,’ but it cannot but render human beings obsolete. Therefore, the only way to avoid an epochal catastrophe is to redesign our societies, starting from the basements, in order to make place for both humans and machines.

These authors tend to underline that our own is an epoch of painful transition, but a ‘golden age’ of humankind is visible at the horizon. We just need to realize that technology is not just a tool of this or that politico-economic system, but rather the actual *primum movens* of human history. A *primum movens* which requires its own politico-economic system to work at its best. The introduction of a basic income guarantee (BIG) – that is, an income to be assigned *unconditionally* to all citizens of industrial countries – is among the various proposed solutions (Hughes 2014, Campa 2014b).

The idea of a *radical societal change*, which has been buried for a few decades in the cemetery of dead ideas, could resuscitate thanks to the crisis of neoliberalism following the 2008 global financial bankruptcy. A crisis that, in the words of sociologist Luciano Pellicani (2015: 397), “has demonstrated the technical – as well as moral – absurdity of the neoliberal paradigm, centered on the idea of self-regulated market.” With the addition that the markets are self-regulating only for the lower classes, given that bankers and capitalists can systematically count on bailouts and public money when something goes wrong.

Among the signs that what Ludwik Fleck called *Denkkollektiv* is changing, we can mention the Nobel Prize for economics assigned in 2008 to Keynesian economist Paul Krugman, who afterwards has also expressed his worries about technological unemployment (2013). Or, perhaps, the planetary success of a book like *Capital in the 21st Century* by Thomas Piketty (2013).

All the optimism of the 1980s has vanished. According to the above-mentioned analysts, the present transition phase is characterized by involuntary unemployment due to automation and precarious jobs due to flexibility policies. True, many jobs have not yet been automatized. In the tertiary sector, we observe a proliferation of caregivers assisting elderly and disabled at home, bellhops, call center operators, waiters, fast foods workers, pizza deliverers, employees of cleaning companies, atypical taxi drivers, external collaborators with VAT registration, refuse collectors, private mail carriers, storekeepers, shop assistants, etc. In many cases, employers still find it more cost effective to hire uneducated workers or desperate immigrants than mechanizing these jobs (assuming that a machine is available or can be designed to do it).

However, what is clear is that all-life and full-time jobs – such as jobs in large factories and public offices – which used to be the prerogative of middle class workers, have significantly shrunk in number as in the level of re-

muneration. Observers seem to be amazed at this phenomenon, as illustrated by a recent article published in *The Wall Street Journal*: “The typical man with a full-time job—the one at the statistical middle of the middle—earned \$50,383 last year, the Census Bureau reported this week. The typical man with a full-time job in 1973 earned \$53,294, measured in 2014 dollars to adjust for inflation. You read that right: The median male worker who was employed year-round and full time earned *less* in 2014 than a similarly situated worker earned four decades ago. And those are the ones who had jobs” (Wessel 2015).

This is what we read in ‘the bible of capitalism,’ not in a blog of angry radicals. However, it is not surprising that today workers earn on average less than their fathers or grandfathers, despite all the progress made by humanity in the meantime, if we keep in mind that the theory of compensation does not say that thanks to technological progress we will all live happily ever after. The theory says that there will be no mass unemployment, if the governments guarantee wage flexibility. The negative side effect of this policy becomes what we might call ‘technological impoverishment.’

Moreover, the automation of the tertiary sector is also relentlessly taking place. We already hear of pizza delivery by means of drones, of autonomous vehicles on the roads, of surgical interventions made by robots, etc. Occasional households have been replaced by cleaning robots in many homes, software substitute for lawyers (Pasquale & Cashwell 2015), the robotization of the military is in a very advanced phase (Campa 2015), and the automation of social work has also started (Campa 2016). So, it is not surprising that specialist economic literature is now taking seriously the issue of technological unemployment (Feldmann 2013, Feng & Graetz 2015).

This does not mean that compensation theory has disappeared from public discourse, but even those analysts still moving in the wake of orthodox economics do not dismiss the hypothesis of mass technological unemployment when talking about the future. For instance, in May 2013, the McKinsey Global Institute published a detailed study of a dozen new technologies defined ‘disruptive’ for their potential impact on the economy. The report is generally optimistic, because it focuses on the chances offered by technological advances to big corporations. However, it also recognizes that “productivity without the innovation that leads to the creation of higher value-added jobs results in unemployment and economic problems, and some new technologies such as the automation of knowledge work could significantly raise the bar on the skills that workers will need to bring to bear in order to be competitive” (Manyika 2013: 151). In a 164-page report, the word ‘unemployment’ appears only once, but at least there is no denial of the problem.

The report assumes that policy makers can limit the negative side effects of advanced robotics and automated knowledge work by improving and re-

newing education. In other words, they “should consider the potential consequences of increasing divergence between the fates of highly skilled workers and those with fewer skills,” and keep in mind that “[t]he existing problem of creating a labor force that fits the demands of a high-tech economy will only grow with time” (ibid.).

This is the old recipe of neoliberalism: one does not need the redistribution of wealth to cope with unemployment and impoverishment; one just needs better educated citizens and workers. If in the short term workers may experience problems, in the long term innovation will result in the creation of new higher value jobs. The report maintains that also workers will take advantage of automation. Nonetheless, it is easy to demonstrate that these ‘potential benefits’ could be turned into ‘potential threats’ by simply expressing them with different words. Let us give an example. At page 7, we read what follows: “It is now possible to create cars, trucks, aircraft, and boats that are completely or partly autonomous. From drone aircraft on the battlefield to Google’s self-driving car, the technologies of machine vision, artificial intelligence, sensors, and actuators that make these machines possible is rapidly improving. Over the coming decade, low-cost, commercially available drones and submersibles could be used for a range of applications. Autonomous cars and trucks could enable a revolution in ground transportation—regulations and public acceptance permitting. Short of that, there is also substantial value in systems that assist drivers in steering, braking, and collision avoidance. The potential benefits of autonomous cars and trucks include increased safety, reduced CO2 emissions, more leisure or work time for motorists (with hands-off driving), and increased productivity in the trucking industry” (Manyika 2013: 7).

As you can see, McKinsey analysts predict a remarkable productivity growth and, among benefits, more *free time* or *working hours* for motorists, due to lower mental and physical fatigue. By using a most brutal language, we may say that the ‘benefits’ for workers will be more *unemployment* or *exploitation*.

10. CONCLUSIONS

This debate seems to teach us that, in a *laissez faire* capitalist economy, the choice boils down to two perspectives: 1) if one introduces policies to safeguard the standard of living of workers by establishing that the minimum wage cannot fall below a certain threshold (moderate left policy), the system produces ‘technological unemployment;’ 2) if it is established that the government must not interfere in negotiations between capitalists and workers, letting the market decide wage levels (moderate right policy), the system

produces ‘technological impoverishment.’ All this happens when an impressive technological development may *potentially* improve the life condition of everybody. Thus, contemporary society seems to be inherently characterized by a ‘technological paradox.’

Traditional political forces converge on the idea that improving education could be the ‘weapon’ to contrast technological unemployment. However, not much attention is paid to the fact that Artificial Intelligence develops exponentially and not only promises to further reduce the workforce in manufacturing, but it will begin to erode the work of specialists in the service sector. In the near future, unemployment could concern economic actors who have attended higher education institutions and invested much time and money to acquire their professional skills, such as journalists, physicians, teachers, lawyers, consultants, managers, etc.

Typically, those who bring attention to the ‘technological paradox’ characterizing our society are immediately halted with a rather trivial argument: the historically known alternative systems to capitalism – namely: feudalism, fascism, and communism – have failed. But this is stating the obvious. To displace this rhetorical argument, the paradox can be better expressed by the following question: How can it be that sentient beings capable of inventing quantum computers and creating artificial life fail to come up with *a new system* of production and consumption in which these and other innovations, if they cannot be beneficial to all individuals at the same extent, at least are not detrimental to the majority?

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Second Section

CONTRIBUTIONS IN ITALIAN

ALLE ORIGINI DELLA SOCIOLOGIA DELLA MUSICA: DAL CONCETTO DI RAZIONALIZZAZIONE A QUELLO DI STANDARDIZZAZIONE

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ABSTRACT

The concept of “standardization” was among the most used, in the 20th century, to describe and categorize socio-economic, as well as cultural, homologating and massifying processes. However, if the field of material consumption (technology, food, etc.) has been the one in which, more clearly, the standardization of production and consumption has given a new paradigm for interpreting current societies, even in music one, wonders, since the beginning of the last century, on the value of this homologation, identified by T.W. Adorno as, precisely, standardization.

1. INTRODUZIONE

Il concetto di “standardizzazione” è stato tra i più usati, nel XX secolo, per descrivere e categorizzare processi socio-economici, ma anche culturali, omologanti e massificanti, anche fino a casi estremi, come quello che George Ritzer ha denominato successivamente “McDonaldizzazione”¹. Se però il settore dei consumi materiali (tecnologie, alimenti, ecc.) è stato quello in cui, in maniera più evidente, la standardizzazione della produzione e dei consumi ha dato un nuovo paradigma per interpretare le società attuali, anche nella musica ci si interroga, ormai da un secolo, sul valore di questa omologazione, identificata da Theodor L. W. Adorno come, appunto, standardizzazione. Ed è proprio a partire da questo autore che questo concetto sembra assumere un valore rilevante nella sociologia della musica, in particolare dalle cosiddette “Lezioni Americane”² in poi. Negli Stati Uniti, infatti, egli venne a contatto con una società in cui sembravano consolidati capitalismo e liberismo, al punto che molte delle sue intuizioni vennero confermate sul campo,

¹ Cfr. G. Ritzer, *Il mondo alla McDonald's*, Il Mulino, Bologna 1997.

² In Italia pubblicate nel volume T.W. Adorno, *Introduzione alla Sociologia della Musica*, Einaudi, Torino 2002.

in primis, quelle sull'industria culturale e sul libero arbitrio del consumatore, che diventa di fatto un ingranaggio di una catena di montaggio. «Il concetto di gusto – scrive Adorno – è superato in quanto non c'è più una scelta: l'esistenza del soggetto stesso, che potrebbe conservare questo gusto, è diventata problematica quanto, al polo opposto, il diritto alla libertà di una scelta che non gli è più empiricamente possibile. [...] Per chi si trova accerchiato da merci musicali standardizzate, valutare è diventata una finzione»³.

2. MAX WEBER: STUDI SULLA RAZIONALIZZAZIONE

Volendo rintracciare un antecedente storico ad Adorno, che contribuì, probabilmente, per vicinanza intellettuale⁴ alla formalizzazione dell'idea del processo di standardizzazione dobbiamo necessariamente risalire ad un altro sociologo, Max Weber che, sebbene non avesse mai introdotto letteralmente il termine “standardizzazione”⁵, nella sua opera postuma, *The Rational and Social Foundations of Music*⁶, fornì, attraverso un'altra idea, quella di “razionalizzazione”, gli strumenti necessari per rintracciarne l'origine e delinearne il processo.

Ma che cosa significa “standard”? Vari dizionari etimologici fanno risalire il termine al XIX secolo quale derivazione del latino *extendere*⁷ (ovvero “allargare”, “diffondere”) e Ulrich Ammon⁸, nei suoi studi di sociolinguistica, individua sei attributi per tale concetto, tra i quali quello di “invariante” e “sovraregionale” ovvero “canonizzato” e che si rifà ad una collettività che va oltre i confini del territorio. Weber però, dicevamo, non definisce il concetto relativo al processo di standardizzazione nel campo musicale, ma si limita ad associare lo standard, il canone⁹ appunto, a un altro

³ T.W. Adorno, *Il carattere di feticcio in musica e il regresso dell'ascolto*, «Dissonanze», Feltrinelli, Milano 1990, pp. 9-10.

⁴ Così come è testimoniato, tra l'altro da numerosissimi altri autori.

⁵ In inglese “standardization” o “standardisation”.

⁶ M. Weber, D. Martindale, J. Riedel, G. Neuwirth, *The Rational and Social Foundations of Music*, Southern Illinois University Press, Carbondale 1958.

⁷ Si veda, ad esempio, la definizione di “standard” del dizionario etimologico Douglas-Harper 2001-2018 <URL=<https://www.etymonline.com/>> (11/2018).

⁸ La nozione di standard è complessa e a definirla convergono fattori di diverso carattere. Ammon individua sei attributi principali definitivi: lo standard è tale in quanto è: (a) codificato, (b) sovraregionale, (c) elaborato, (d) proprio dei ceti alti, (e) invariante, (f) scritto. (U. Ammon, *Explikation der Begriffe 'Standardvarietät' und 'Standardsprache' auf normtheoretischer Grundlage*, in *Sprach-licher Substandard*, hrsg. von G. Holtus & E. Radtke, Niemeyer, 3 voll., vol. 1°, Tübingen 1986, pp. 1-62).

⁹ Il termine che appare nella trattazione in lingua tedesca è “*normal*”.

processo, quello di “razionalizzazione”¹⁰. Ed è indagando primariamente sul concetto di razionalizzazione che potremo arrivare a definire cosa è invece la standardizzazione in campo musicale. Ripercorriamo quindi brevemente i punti chiave relativi alla razionalizzazione¹¹ che è un processo in cui la razionalità (dal latino *ratio* cioè calcolo, computo), appunto, viene applicata ad un’azione fatta per raggiungere uno scopo. Si tratta quindi di un agire dotato di senso¹² in cui lo scopo prevale sul valore¹³.

Sembra che il termine “razionalizzazione” sia stato introdotto per la prima volta da Friedrich von Gottl-Ottlilienfeld¹⁴ in riferimento ai lavori di Frederick W. Taylor¹⁵ relativamente ai processi produttivi nell’industria, per designare l’insieme delle misure tecnico-organizzative mirate all’aumento della produttività. Con Max Weber si compie il passaggio dalla concezione economica a quella sociale (ovvero socioculturale) della razionalizzazione, con la convinzione che la razionalizzazione nell’ambito dell’impresa abbia avuto conseguenze positive per l’economia politica e il riconoscimento del ruolo svolto da fattori extraeconomici¹⁶. In *The Rational and Social Founda-*

¹⁰ «In all cases, the substantive rationality is considered to be a “valid canon”; that is, a unique “standard” against which reality’s flow of un- ending empirical events may be selected, measured, and judged». M. Weber, *Politics as a Vocation* (1946) in *Essays in Sociology*, edited and translated by Hans H. Gerth and C. Wright Mills, Oxford University Press, New York 1958, pp. 77-128.

¹¹ A tal proposito si invita alla lettura del saggio di E. Raganato, *I concetti di razionalità e razionalizzazione nella Sociologia della Musica*, «Orbis Idearum. European Journal of the History of Ideas», Vol. 5, Issue 1, 2017.

¹² Max Weber lo definisce nel modo seguente: «Agisce in maniera razionale rispetto allo scopo colui che orienta il suo agire in base allo scopo, ai mezzi e alle conseguenze concomitanti, misurando razionalmente i mezzi in rapporto agli scopi, gli scopi in rapporto alle conseguenze, e infine anche i diversi scopi possibili in rapporto reciproco». Cfr. M. Weber, *Wirtschaft und Gesellschaft* (1922), tr. it. *Economia e società*, vol. I, Milano 1995, p. 23.

¹³ «Agisce in maniera puramente razionale rispetto al valore colui che – senza riguardo per le conseguenze prevedibili – opera al servizio della propria convinzione relativa a ciò che ritiene essergli comandato dal dovere, dalla dignità, dalla bellezza, dal precetto religioso, dalla pietà e dall’importanza di una “causa” di qualsiasi specie». *Ivi*, p. 21. Sulle premesse e le implicazioni della prospettiva weberiana, cfr.: R. Campa, *Etica della scienza pura. Un percorso storico e critico*, Sestante Edizioni, Bergamo 2007, pp. 385-392; Id., *L’eredità di Nietzsche nella sociologia di Max Weber*, «Orbis Idearum. European Journal of the History of Ideas», Vol. 4, Issue 2, 2016, pp. 53-91.

¹⁴ F. von Gottl-Ottlilienfeld, *Die natürlichen und technischen Bedingungen der Wirtschaft*, Tübingen 1914.

¹⁵ F.W. Taylor, *The principles of scientific management* (1911), tr. it. *Principi di organizzazione scientifica del lavoro*, ETAS, Milano 1976.

¹⁶ Questo concetto ampliato di razionalizzazione ha acquistato rilevanza solo nell’area linguistica tedesca, soprattutto nell’ambito della sociologia e della filosofia dello spirito,

tions of Music, quindi, Weber studia la relazione tra forme musicali e società, sottolineando la significativa interdipendenza tra realtà sociale e produzione musicale. Nell'identificare gli elementi specifici della creazione musicale che possono significativamente essere messi in relazione alla struttura sociale in cui vengono prodotti, Weber mostra come la razionalizzazione si sia affermata nel tempo e come la padronanza del materiale sonoro che ne è derivata abbia contribuito allo sviluppo della musica occidentale nella civiltà moderna. Attraverso una comparazione diacronica e sincronica tra musica antica e moderna e tra musica europea ed orientale, l'autore evidenzia come il fenomeno della razionalizzazione si sia manifestato solo nella cultura e nella musica occidentale. Questo processo, iniziato per fini pratici¹⁷, da una speculazione teorica sui rapporti intervallari¹⁸ e dai vari sistemi di divisione dell'ottava¹⁹, ha portato alla nascita del cosiddetto "sistema temperato"²⁰, ovvero il sistema razionale e matematico di suddivisione dell'ottava in dodici suoni, posti tra loro ad intervalli uguali e discreti. Il sistema temperato è quindi per Weber il risultato di una razionalizzazione "diretta allo scopo" che inizia nei conventi medievali con i cosiddetti "*neumi*", ausili grafici per l'apprendimento delle composizioni musicali.

Il processo di razionalizzazione comporta nel tempo una definizione di pratiche convenzionalmente accettate sia per quanto riguarda la tecnica musicale che per altri aspetti legati alla produzione di musica, tra i quali quelli relativi alla costruzione degli strumenti musicali²¹.

Weber, sul finire della trattazione si sofferma anche sulla razionalizzazione che ha investito la produzione di strumenti musicali, partendo dagli strumenti ad arco fino all'organo e al pianoforte. A questo punto della trattazione possiamo già individuare due rami principali del campo musicale in cui la razionalizzazione ha permesso una "canonizzazione" di elementi, pro-

mentre in Francia e nei paesi anglosassoni resta prevalente il significato ristretto di tipo economico. La razionalizzazione sociale ha costituito inoltre il tema dominante della filosofia critica tedesca degli anni venti e trenta, che vide autori di sinistra, liberali e conservatori tutti uniti nel dare una valutazione negativa del fenomeno. Cfr. H. Schnädelbach, *Zur Rehabilitierung des animal rationale*, Vorträge und Abhandlungen 2, Frankfurt an Mainz 1992.

¹⁷ M. Del Forno, *Da Weber a Schomberg. Razionalizzazione e disincanto nella Dodecafonìa*, «Sociologia», Fondazione L. Sturzo, Roma 2005.

¹⁸ Sempre Del Forno scrive che tali necessità erano principalmente a scopo mnemonico e di intonazione.

¹⁹ L'intervallo di ottava è lo spazio compreso tra due note il cui rapporto di frequenza è 2:1.

²⁰ M. Weber, *Politics as a Vocation*, cit., p. 100.

²¹ L. Savonardo, *Sociologia della Musica*, Edt, Torino 2014, p. 30.

cedure, “azioni orientate allo scopo”: la notazione musicale e la costruzione degli strumenti musicali. Volendo quindi definire il processo di standardizzazione musicale (recuperandone la relazione con il concetto di razionalizzazione) relativamente agli studi di Weber, potremmo dire che è un processo di estrema razionalizzazione che nella musica si è compiuto attraverso l'utilizzo della scrittura in notazione musicale e attraverso la tecnologia degli strumenti musicali. Ovviamente, tutte le cause di questo processo sono da ricondursi alle stesse della razionalizzazione ed anzi, in quest'ottica, la standardizzazione si configura come una conseguenza dell'estrema razionalità.

3. GEORG SIMMEL: IL RITMO COME PARADIGMA DELLA MODERNITÀ

Gli studiosi orientati all'interpretazione sociologica della musica, quindi impegnati a reperire regolarità dei comportamenti collettivi, dicevamo, sono stati vari. Tra questi, Georg Simmel, coevo di Weber, utilizzò alcuni paradigmi mutuati dalla musica (melodia, ritmo, armonia, ecc.) per analizzare la società anche in termini di omogeneizzazione culturale. In particolare Simmel, concentrò parte del suo lavoro sociologico, nell'elaborazione di un paradigma di ricerca come il ritmo che risulta ancora oggi di grande utilità nell'analisi dei ritmi frenetici che caratterizzano la società postmoderna. Il ritmo, oltre ad essere un elemento musicale originario rappresenta il primo schema di elaborazione mentale in altri ambiti della vita dell'uomo²². Simmel, nella sua analisi, rileva che benché il ritmo sia stato sempre un elemento caratterizzante e fortemente presente in ogni ambito della vita sociale, nella società moderna si è molto ridotto come fattore che connota la vita sociale ed anzi, secondo Simmel è stato proprio preda di un totale livellamento. Tale stato di cose deve essere imputato al denaro che non ha fatto altro che spersonalizzare i rapporti umani²³. Nell'economia monetaria tutti i rapporti tra uomini tendono a farsi misurabili e calcolabili e si ha il prevalere del calcolo rispetto al sentimento. Se da un lato la ritmicità della vita civile, a causa del denaro, si è abbassata, dall'altro, l'elemento ritmico si è notevolmente innalzato fino ad arrivare a livelli estremi, nella metropoli (nella quale l'espressione dell'accelerazione del ritmo di vita è sintomo di modernità) e

²² Per Simmel, infatti, «la configurazione simmetrico-ritmica si presenta come la prima e la più semplice forma con cui l'intelletto stilizza, per così dire, la materia della vita, la rende dominabile e assimilabile. È il primo schema mediante il quale la ragione può penetrare nelle cose e dare loro una forma». Cfr. G. Simmel, *Filosofia del denaro* (1889), trad. it. di A. Cavalli, R. Liebhart e L. Perucchi, UTET, Torino 1984, p. 688.

²³ Visto che con esso si può comprare tutto e si può comprare anche il servizio degli altri in qualsiasi momento, senza che siano gli impulsi e gli stimoli individuali a dettare il “ritmo”.

in particolare nel lavoro di fabbrica. In tali contesti, il lavoratore è vincolato alla ripetizione rigorosamente costante di certi movimenti. La standardizzazione della produzione in serie riverbera e potenzia la complementare standardizzazione del comportamento (tutti si somigliano, tutti agiscono allo stesso modo).

Anche l'atteggiamento frenetico col quale l'individuo si rapporta alla cultura, rivela l'influenza del denaro e delle logiche di mercato che hanno totalmente invaso una sfera prima riservata all'interiorità del soggetto. In questo eccesso di stimoli si cerca di condensare «possibilmente in breve tempo, una quantità possibilmente grande di emozioni, interessi, piaceri»²⁴. L'esaltazione estetica che caratterizza i prodotti culturali e non, altro non è che un *escamotage* per giustificare la presenza sul mercato di una grande quantità di merci spesso inutili e di esercitare una maggiore attrattiva sul consumatore. Si assiste, da parte dei sistemi di produzione e riproduzione culturale ad un tentativo nei confronti degli individui di sollecitare un adeguamento ai ritmi e ai valori della vita metropolitana. Diventa sempre più difficile quindi che l'individuo possa partecipare ad una vita culturale aderendovi completamente, coinvolgendo totalmente la sua personalità. Tutta la cultura subisce questo processo di oggettivazione in quanto la produzione di massa, prevalendo sull'inclinazione personale, non permette una scelta individuale. Questo appiattimento di cui il mondo moderno della grande metropoli, descritto da Simmel, è teatro, riguarda anche il gusto musicale. Qui ogni differenza qualitativa scompare senza lasciare traccia, ogni sussulto psicologico è bandito nella misura in cui siamo anestetizzati a causa di una sovrastimolazione sensoriale incessante che altrimenti ci esaurirebbe in un batter d'occhio²⁵, e gli individui si configurano come brulicanti monadi senza porte né finestre, massificate e tenute "insieme" soltanto dall'omologazione al consumo²⁶.

4. THEODOR ADORNO E LA STANDARDIZZAZIONE

Se in Weber e Simmel, quindi, possiamo rintracciare gli antecedenti storici, relativamente al campo socio-musicale, della standardizzazione, con Adorno, tale concetto, si delinea lucidamente. Con questo autore, infatti, la trattazione sulla standardizzazione diviene specificamente musicale, quando, in

²⁴ G. Simmel, *Estetica e sociologia*, Armando Editore, Roma, 2006, p. 63.

²⁵ Cfr. G. Simmel, cit., e G. Simmel, *Le metropoli e la vita dello spirito*, trad. it. di P. Jedlowski, R. Siebert, Armando Editore, Roma 1995.

²⁶ *Ibid.*

*Musica Leggera*²⁷ analizza (non senza un giudizio di merito) quello che definisce come un caso di inesorabile “decadimento”²⁸ ovvero la musica da consumo di massa. Già precedentemente²⁹ aveva indagato sulle conseguenze dell'estrema razionalizzazione, cioè su quella che Weber chiamava «la gabbia d'acciaio», ma in questo saggio l'analisi (e l'invettiva) diventa più puntuale. Adorno definisce la standardizzazione musicale come un «fenomeno sintomatico della reificazione musicale, del mero carattere di merce»³⁰ e individua il prodotto tipico di questo processo nella forma canzone³¹ ed in generale in tutta la musica cosiddetta “leggera”. Sebbene la canzone derivi da forme preesistenti, in particolare le danze tradizionali³², che avevano degli schemi standardizzati ben prima dell'avvento della fruizione di massa, Adorno distingue, ad esempio, quella che poteva essere la composizione di una Polka da parte di F. Chopin, o di una qualsiasi danza da parte di Mozart, dalle operazioni e dalle finalità dell'industria del settore³³. La canzone riprende schemi fissi, dei *template* da riempire con soluzioni musicali già codificate³⁴. In questo senso possiamo considerare Adorno come un antesignano nel prevedere tante di quelle applicazioni odierne da *tablet* o *smartphone*, che ti consentono di comporre una canzone attraverso una serie di operazioni preimpostate, di *patterns*. Fornire degli schemi familiari, non impegnativi dal punto di vista intellettuale, mette il fruitore in uno stato psicologico di disponibilità all'ascolto³⁵, che però mira a reazioni standardizza-

²⁷ T.W. Adorno, *Introduzione alla Sociologia della Musica*, Einaudi, Torino 2002, p. 26.

²⁸ *Ivi*, p. 27.

²⁹ T.W. Adorno, *Filosofia della musica moderna*, Einaudi, Torino 2002.

³⁰ *Ivi*, p. 32.

³¹ «Nei paesi industriali progrediti la musica leggera è definita dalla standardizzazione: suo prototipo è la canzone di successo. Il che è stato ammesso con disarmante energia reclamistica già vent'anni or sono da un popolare manuale americano sul come scrivere e vendere canzoni di successo». *Ivi*, p. 31.

³² «Le forme standard della musica leggera sono derivate da danze tradizionali, ma anche queste erano in buona misura standardizzate ancora moltissimo tempo prima che la musica commerciale si legasse all'ideale della produzione di massa». *Ivi*, p. 39.

³³ C'è differenza tra la standardizzazione della musica leggera e i modelli rigorosi della musica seria. «Il rapporto tra la musica superiore e le sue forme storiche è dialettico. A loro essa si accende, le rifonde, le fa scomparire e poi ritornare in quanto scompaiono. La musica leggera invece usa le forme come vasi vuoti». *Ivi*, p. 32.

³⁴ «La standardizzazione va dall'impianto generale fino ai dettagli. La regola fondamentale, secondo la prassi americana valida per tutta quanta la produzione, è che il ritornello dev'essere di trentadue battute con al centro un bridge, e cioè una parte che riconduce alla ripetizione. Anche i vari tipi di canzonetta sono standardizzati». *Ivi*, p. 31.

³⁵ «Condizionato dallo schema, l'ascoltatore risolve immediatamente la digressione nella familiarità delle sue reazioni già condizionate». *Ivi*, p. 36.

te³⁶, semplicemente insaporendo «la perpetua identità senza metterla in pericolo»³⁷ e facilitando un'immedesimazione emotiva con la canzone che dà l'illusione che certe parole e certa musica siano state scritte appositamente per noi. Anche l'offerta di generi commerciali variegata è una finta libertà che l'industria musicale concede all'individuo³⁸. A questa sfera afferisce l'invenzione da parte delle riviste specializzate e dei negozi fisici e virtuali di dei tanti generi musicali nei quali incasellare i vari prodotti che rispondono alle caratteristiche necessarie per essere commercializzati³⁹. Secondo Adorno, il processo di standardizzazione connaturato all'industria culturale riguarda sia i prodotti che il pubblico destinato ad usufruirne.

L'uomo sacrifica l'individualità, inserendosi nella regolarità di ciò che ha successo, e fa quel che tutti fanno per il fatto fondamentale che dovunque e in tutta la produzione standardizzata dei beni di consumo si offre all'individuo sempre la stessa cosa. Tuttavia la necessità che ha il mercato di occultare questa uguaglianza conduce alla manipolazione del gusto e a quella apparenza di individualità della cultura ufficiale, che di necessità cresce proporzionalmente con la liquidazione dell'individuo⁴⁰.

Anche il Jazz, oltre alla musica leggera, è per Adorno fortemente rappresentativo del concetto di standardizzazione⁴¹, con le sue caratteristiche di ripetitività, intercambiabilità e possibilità di sostituzione delle parti (che non sono possibili, invece, nella "musica seria", poiché il tutto, la forma, dipende dalle relazioni tra le parti).

Tali posizioni, che possono sembrare alquanto rigide, anche da chi non ne

³⁶ «La standardizzazione della musica leggera, in forza del suo crudo semplicismo, non va interpretata tanto da un punto di vista interno-musicale quanto da un punto di vista sociologico. Essa mira a reazioni standardizzate, e il successo che incontra, [...] conferma che l'operazione le è riuscita». *Ibid.*

³⁷ *Ivi*, p. 32.

³⁸ «[La pseudo-individualizzazione] del compratore che sceglie liberamente al mercato secondo i suoi bisogni, mentre è questa stessa aureola che obbedisce alla standardizzazione e fa sì che l'ascoltatore non si accorga di consumare prodotti già digeriti a dovere». *Ivi*, p. 39.

³⁹ Una di queste, ad esempio, è quella di essere riconducibile ad uno di questi generi.

⁴⁰ T.W. Adorno, *Il carattere di feticcio in musica e il regresso dell'ascolto*, cit., pp. 23-24.

⁴¹ «Se è certa la presenza di elementi africani nel jazz, altrettanto lo è, fin da principio, l'irreggimentazione, la riduzione a rigido schema dell'elemento irregolare, la fusione del gesto di rivolta con la disposizione alla cieca obbedienza. [...] Furono proprio queste tendenze intrinseche a favorire la standardizzazione, lo sfruttamento commerciale e la pietrificazione del genere». In T.W. Adorno, *Moda senza tempo. Sul jazz*, in *Prismi. Saggi sulla critica della cultura*, Einaudi, Torino 1972, p. 116.

è sostanzialmente chiamato in causa⁴², si “ammorbidiscono” nella continuazione del saggio, aprendo degli spiragli di grande attualità: «Non si deve però paragonare in maniera troppo letterale il modo di produzione della musica leggera intesa come prodotto di massa alla produzione di massa industriale. Le forme di diffusione sono molto razionalizzate, e così pure la pubblicità che reclamizza - specie nel sistema radiofonico americano - precisi interessi industriali. Ma questo, tutto sommato, si riferisce alla sfera della circolazione, non a quella della produzione»⁴³.

Dopo l'analisi del fruitore di canzoni, Adorno focalizza l'attenzione sulla figura del compositore di musica leggera, che sebbene piegato alla logica del denaro e del sistema produttivo, non per questo deve necessariamente ritenersi di scarsa qualità⁴⁴. La tolleranza dell'autore in questo caso vale anche per le composizioni prodotte⁴⁵.

5. EDGAR MORIN: LA STANDARDIZZAZIONE IMPOSSIBILE

Molto vicina alla posizione possibilista di Adorno è in questo senso quella successiva di Edgar Morin che disquisendo sulle formidabili industrie culturali americane, in particolare quella cinematografica, nota come non si possa produrre niente di veramente identico ed anche in un contesto altamente standardizzato come quello di Hollywood, la produzione deve fare necessariamente appello alla creatività, che ha permesso che dalla mediocrità seriale venissero fuori anche dei grandi capolavori⁴⁶. Allo stesso modo si riferisce alla musica Rock. Morin però, a differenza dei precedenti autori, ha avuto anche la possibilità di riflettere sugli effetti della standardizzazione culturale a livello globale immaginando una sostanziale impossibilità fisiologica all'omologazione. «Quando si tratta di arte, di musica, di letteratura, di poesia, la mondializzazione culturale non è omogeneizzante»⁴⁷. Parla piuttosto di grandi ondate trans-nazionali che favoriscono comunque l'emergere di originalità meticce. La tesi di Morin è che la globalizzazione abbia operato una mondializzazione tecno-economica, favorendone un'altra sistematica-

⁴² Adorno è solitamente un bersaglio privilegiato dai “critici” musicali o dai jazzisti che si occupano di letture “impegnate”.

⁴³ T.W. Adorno, *Introduzione alla Sociologia della Musica*, cit., p. 37.

⁴⁴ «Il fatto che tanti musicisti di possibilità ben maggiori lascino abusare di sé in questa maniera ha naturalmente ragioni economiche». *Ivi*, p. 40.

⁴⁵ «Perfino in questa fase avanzata della totale commercializzazione si incontreranno, specie in America, idee di prima mano». *Ibid.*

⁴⁶ E. Morin, *Lo spirito del tempo*, Meltemi, Roma 2005.

⁴⁷ E. Morin, *Oltre l'abisso*, Armando Editore, Roma 2016, p. 52.

mente incompiuta, di tipo culturale. Sebbene quindi esistano numerose correnti transculturali, che costituiscono una pseudo-cultura planetaria, frutto dei rimaneggiamenti che i mass-media hanno prodotto nel XX secolo, queste hanno prodotto continuamente nuove culture, nuovi temi e nuovi folklori. «Un folklore planetario si è costruito e si è arricchito attraverso integrazioni e incontri»⁴⁸, cosicché così come si è diffuso il Jazz che ha dato vita a nuovi stili in tutto il mondo, il Tango argentino, il Mambo cubano, ecc., così e soprattutto ha travalicato i confini il Rock che dagli Stati Uniti si è diffuso in tutto il mondo prendendo ogni volta un'identità nazionale. La musica quindi subisce l'industrializzazione e la commercializzazione, una "McDonaldiszazione" generalizzata che tende all'omogeneizzazione, che tuttavia rimane incompiuta fino all'avvento di una nuova ondata transculturale.

6. CONCLUSIONI

Per concludere questa breve disamina sul concetto di standardizzazione, a seguito di tanti studi e riflessioni tutto sommato anche molto recenti sull'argomento, intendo riprendere un altro concetto di Morin, quello della "complessità", per suggerire un'ulteriore possibilità di analisi sul fenomeno in oggetto: «complessificare significa tentare di vedere non solo il ruolo molteplice e diverso delle interazioni, delle sovrapposizioni, delle retroazioni, degli antagonismi [...] ma anche gli aspetti opposti di uno stesso fenomeno»⁴⁹. In quest'ottica la standardizzazione assume quindi un valore parziale, sia contestualizzato storicamente (ovvero, ad esempio, al tempo di Adorno) sia riattualizzato (dal momento riguarda, infatti, solo il mondo "occidentalizzato" e non le potenze culturali emergenti). Evidentemente poi, il cambiamento di paradigmi economici e sociali indotti dalla globalizzazione, la progressiva dematerializzazione dell'industria musicale, la libera diffusione in rete, la facilità nell'*home recording*, ecc., hanno avuto un impatto significativo anche a livello culturale, che nello specifico musicale si manifesta, ad esempio, con una liquidità tra generi, in cui il paradigma dominante sembra essere, attualmente, quello del *crossover*.

Nonostante una necessità di riattualizzazione, l'eredità di Adorno, tuttavia, rimane fondamentale nello stesso campo musicale⁵⁰. Non solo guardando all'operato delle grandi produzioni delle *Major* discografiche ma anche, ad esempio, a tutti quei *software* che sono disponibili in rete e che consentono a ciascuno di "creare" la propria musica, spesso in modo intuitivo e senza

⁴⁸ *Ivi*, p. 51.

⁴⁹ *Ivi*, p. 111.

⁵⁰ Cfr. E. Fubini, *Il pensiero musicale del Novecento*, ETS, Pisa 2011, p. 131.

bisogno di pregresse conoscenze tecniche e teoriche musicali. Nella maggior parte dei casi si tratta di algoritmi pre-impostati che consentono di fare delle operazioni già codificate, ottenendo dei risultati che sebbene possano essere combinati in un'infinità di modi (come in un processo di pseudo-individualizzazione), limitano in ogni caso la creatività personale, che può essere eventualmente replicata seguendo semplicemente delle istruzioni come se fossero ricette di cucina. La trattazione a questo punto implicherebbe un'ulteriore disamina (che esulerebbe, tuttavia, dagli obiettivi di questo saggio) e un confronto sul campo tecnologico (già previsto, peraltro, da Adorno⁵¹), a partire da un altro autore coevo al Nostro, ossia Walter Benjamin⁵². Ma senza voler addentrarsi in giudizi né di merito (Adorno stesso fu accusato di avere una visione elitaria dei consumi musicali⁵³) né estetici (musica seria, musica leggera, ecc.), che sembrano oramai superati dall'attuale Musicologia, riteniamo utile sottolineare che ad oggi, nel *melting pot* globale, certe formule e certe pratiche rappresentano solo una parziale, seppur rilevante, visione delle cose ma riportano l'urgenza di una nuova profonda riflessione sul significato sociale della musica stessa.

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⁵¹ «La tecnica – scrive tuttavia Adorno – non ha colpa come tale di quei risultati che gli ingenui, e coloro che sono rimasti inferiori ad essa nel livello della propria coscienza, credono di osservare dovunque: essa ne ha colpa solo per via della sua posizione e del suo valore sociale. Ad esempio, la standardizzazione ha la sua causa tecnica nel fatto che il prodotto ripartito tra le masse nasce da una fonte che fornisce a tutti stessa identica cosa. Ma ciò che nasce da questo, la virtuale standardizzazione della coscienza, dipende a sua volta dal sistema nel cui ambito vengono propagati gli stimoli standardizzati, dipende dalla potenza di dominio che si cela dietro i mezzi di comunicazione, le condizioni d'ascolto e i comportamenti sedimentati di coloro che accettano tutto questo». T.W. Adorno, *Il fido maestro sostituto studi sulla comunicazione della musica*, Einaudi, Torino 1982, pp. 249-250.

⁵² Walter Benjamin (1892 - 1940), fu un filosofo, critico e sociologo, della Scuola di Francoforte, di cui lo stesso Adorno faceva parte. Uno dei suoi saggi più conosciuti è *L'opera d'arte nell'epoca della sua riproducibilità tecnica*, scritto tra il 1935 e il 1939.

⁵³ Per il filosofo Manlio Sgalambro (recentemente scomparso e legato in un sodalizio umano all'artista Franco Battiato), Adorno ha ridotto «i problemi metafisici della musica a problemi sociali, e questi ultimi a problemi musicali». Cfr. M. Sgalambro, *De mundo pessimo*, Adelphi, Milano 2004, p. 169.

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IL CULTO DELLA SINGOLARITÀ. COM'È NATA LA RELIGIONE DELLA TECNOSCIENZA

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ABSTRACT

The idea of “technological singularity” – that is, of a dramatic and irreversible change in the human condition due to the vertiginous growth of new technologies – is one of the theoretical cornerstones of transhumanist futurology. The article shows how this idea fits perfectly into a particular historical and cultural path of the Western World; one aimed at overcoming traditional religions and replacing them with a new cult. Attempts to found a new universal religion, compatible with the developments of science and technology, have followed one another since the times of the scientific revolution and have intensified after the beginning of the industrial revolution. In the most recent attempts, the focus is on the mystical or salvific character of human evolution, which would have technological singularity as its last stage. Singularity is framed by its theoreticians within different scientific paradigms, here qualified as “biological,” “cybernetic,” “informatic,” “robotic,” and “hybrid.”

1. PREMESSA

La singolarità tecnologica è uno dei capisaldi teorici della futurologia di orientamento transumanista, anche se – va subito precisato a scanso di equivoci – la credenza in questo evento futuro non è *conditio sine qua non* per dirsi transumanisti. Perciò, è in uso anche l’aggettivo-sostantivo “singolaritariano/i” per indicare chi ripone fiducia in questo sviluppo delle società tecnologicamente avanzate. Alcuni studiosi hanno giustamente notato che la visione dei transumanisti singolaritari, pur partendo da premesse scientifiche, sembra sconfinare nella religione e nella metafisica (Manzocco 2014; Paura 2016). Ciò che intendiamo mostrare in questo articolo è che lo “sconfinamento” non è affatto accidentale. Sebbene molti transumanisti contemporanei siano atei o agnostici, alle origini del transumanesimo c’è il consapevole tentativo di fondare una nuova religione.

L’idea di fondare una nuova religione compatibile con la scienza moderna ha radici profonde, che vanno indietro fino alla Rivoluzione copernicana

e da essa traggono linfa vitale. L'ansia di rinnovamento spirituale che si diffonde nel clima del Rinascimento non è infatti limitata alle contaminazioni neopagane del Cattolicesimo, alla Riforma protestante o alle tante eresie cristiane che predicano il ritorno agli insegnamenti della Bibbia e del Vangelo, variamente interpretati. Dagli albori del Seicento ai nostri giorni, in Europa, è tutto un proliferare di forme alternative di spiritualità, di sette esoteriche, di nuovi culti intenzionati a trovare punti d'accordo con gli sviluppi della scienza e della tecnica. Si pensi al deismo degli illuministi, alla spiritualità delle obbedienze massoniche, all'esoterismo degli Illuminati di Baviera, al culto dell'Essere Supremo istituito da Robespierre nei giorni della rivoluzione francese, alla religione dell'umanità fondata da August Comte, o alla religione-morale della velocità lanciata dai futuristi italiani all'inizio del Novecento (Campa 2012: 191-211). Sono, questi, tutti tentativi di riempire il vuoto generato dalla crisi del cristianesimo tradizionale.

Ripercorrendo la storia dell'idea di singolarità tecnologica, cercheremo di mostrare come essa si incastri perfettamente in questo percorso storico e culturale dell'Occidente.

2. L'IDEA DI "SINGOLARITÀ TECNOLOGICA"

C'è un fenomeno localizzato nel futuro che sta modificando i nostri pensieri e le nostre azioni, i nostri modi di esistenza, la nostra vita quotidiana, proprio come un buco nero distorce lo spazio tempo e influenza il comportamento dei corpi celesti che lo circondano, inclusi quelli molto lontani dall'orizzonte degli eventi. Se sta cambiando, in modo sempre più rapido, il nostro modo di lavorare, di conoscere, di comunicare, di viaggiare, di divertirci, di amare, di riprodurci, di combattere, è perché c'è questo analogo sociale di un oggetto supermassivo che modifica le strutture della società. Questo fenomeno è la cosiddetta "singolarità tecnologica". Quello che abbiamo appena esposto potrebbe essere il nucleo teorico di un'ipotetica "sociologia della singolarità". Sennonché, esposta in questi termini, la teoria farebbe certamente sobbalzare qualche luminare della materia. Naturalmente, si può vedere l'intera questione al contrario, rispettando la freccia del tempo ed evitando scivolamenti in una logica deterministica: una serie di cambiamenti sempre più rapidi nella nostra società ci sta conducendo verso la singolarità tecnologica. Questa seconda versione è più prosaica, più convenzionale, o – in negativo – meno poetica, meno misteriosa, ma proprio per questo più facilmente incorporabile nel paradigma sociologico dominante.

Il termine "singolarità" (lat. *singularitas*) è da tempo utilizzato nel linguaggio ordinario per indicare ciò che è originale, eccezionale, caratteristico di un individuo. Il termine è utilizzato anche in alcune discipline scientifiche,

con diverse accezioni. Nel linguaggio della matematica, indica un punto in cui una funzione assume un valore infinito (per esempio, il valore di y nella funzione $y = 1/x$, quando x assume valore zero). Nel linguaggio dell'astronomia, indica un punto nello spazio-tempo in cui la materia è infinitamente densa, il suo volume tende a zero e la sua massa all'infinito, tipicamente il centro di un buco nero. Nel linguaggio della biologia evoluzionistica, indica i "salti" salienti dell'evoluzione, come la comparsa della vita o l'ominazione. Recentemente, il termine ha acquisito un nuovo significato nell'ambito della futurologia. Se i dizionari italiani sembrano in generale refrattari, o perlomeno in ritardo, nell'accogliere il nuovo uso, non così è per gli *English Oxford Living Dictionaries*, che tra le definizioni hanno aggiunto la seguente: «Singularity = (usually *the singularity*) A hypothetical moment in time when artificial intelligence and other technologies have become so advanced that humanity undergoes a dramatic and irreversible change».

Nella definizione si sottolinea il fatto che il termine è introdotto dall'articolo determinativo "the", quando si riferisce allo stato futuro della società umana, proprio perché si tratta di una trasformazione unica e irreversibile. Per quanto poco rispettate in ambito accademico, molto più aggiornate e approfondite sono le voci, nelle principali lingue del mondo, rintracciabili sull'enciclopedia della rete, Wikipedia: "singolarità tecnologica", "technological singularity", "singularité technologique", "technologische Singularität", "technologiczna osobliwość", ecc. Come si può notare, per via del ruolo che in essa assume l'intelligenza artificiale – destinata in previsione a superare l'intelligenza umana e tendere all'infinito – il termine nell'accezione futurologica è seguito dall'aggettivo qualificativo "tecnologica".

3. IL PARADIGMA BIOLOGICO

L'esigenza di un rinnovamento spirituale diventa particolarmente sentita dopo l'affermazione, negli ambienti scientifici, della teoria dell'evoluzione di Charles Darwin e la conseguente crisi del creazionismo biblico. Che il vecchio mondo stia definitivamente crollando sotto i colpi della scienza, è opinione anche del padre gesuita e paleoantropologo Pierre Teilhard de Chardin. Per dar conto dei cambiamenti più radicali, il religioso francese ricorre al concetto di "singolarità" (Teilhard 2013). Utilizza il termine nell'accezione biologico-evoluzionistica, ma inquadra il fenomeno in una cornice misticeggiante. Immagina infatti l'intera evoluzione del cosmo come una spirale ascendente che si sviluppa attorno a un asse "divino" e indica la nascita della vita e la comparsa dell'umano come passaggi fondamentali,

che si pongono tra l'Alfa della creazione e l'Omega dell'apocalisse (Campa 2017a). Tuttavia, insiste sul fatto che tali eventi non possono essere considerati punti d'arrivo, una volta che si ammette la realtà storica dell'evoluzione e la possibilità teorica dell'evoluzione autodiretta. Ai salti evolutivi già avvenuti devono seguire ulteriori vette, come la comparsa dell'ultraumano e infine del transumano. La singolarità finale, quella transumana, per lo scienziato gesuita, costituirà il compimento della storia, ovvero la Parusia, l'avvento del Cristo cosmico (Teilhard de Chardin 1968, 1972; Campa 2016).

Attraverso i suoi scritti più filosofici, che notoriamente non ricevono l'*imprimatur* delle gerarchie ecclesiastiche, Teilhard de Chardin intende revisionare la teologia cristiana e attivare nella stessa Chiesa cattolica le risorse culturali ed energie psichiche necessarie per fare fronte alla sfida della modernità e avviare una fase di evangelizzazione rinnovata, al punto che non è azzardato parlare di "neo-cristianesimo"¹. Il gesuita si rende conto che le nuove scoperte scientifiche, a partire dalla rivoluzione copernicana per arrivare alla teoria dell'evoluzione, passando per la scoperta dell'immensità del cosmo e degli abissi temporali che ci separano dalla nascita della vita sulla terra, per arrivare allo straordinario sviluppo dell'industria e delle comunicazioni, chiamano a una religiosità diversa. Così si esprime: «Sino a ieri, il cristianesimo rappresentava il punto più elevato raggiunto dalla coscienza umana nel suo tentativo di umanizzarsi. Ma occupa ancora questo posto, o per lo meno potrà occuparlo ancora per molto tempo? ... Molti ritengono di no» (Teilhard 1972: 148). Gli scettici si dividono in due categorie. Da un canto c'è chi, una volta constatato che «il fiore evangelico si adatta male al clima critico e materialistico del mondo moderno», conclude che si può vivere benissimo senza religione. D'altro canto, tra coloro che hanno compreso che la stagione del cristianesimo è passata, c'è anche chi sostiene che si debba trovare al più presto un degno sostituto, che «è necessario che un altro tronco cresca nel campo delle religioni» (ibid.).

Teilhard de Chardin è invece convinto che l'umanità possa ancora placare la propria sete di spiritualità restando nell'ambito di un cristianesimo profondamente rinnovato. Le moltitudini sono disorientate, ma cercano ancora *qualcuno* che tenga il timone, e perciò si immergono in nuove correnti spirituali, in cerca di senso e direzione. È vero che «la maggior parte di quelli che le diffondono vi salutano, almeno implicitamente, la comparsa di una reli-

¹ La letteratura critica che evidenzia questo aspetto è piuttosto corposa e non possiamo citarla tutta. Ci limitiamo a menzionare quello che ci pare il tentativo più ambizioso e accurato di ricostruire il pensiero teologico e filosofico di Teilhard de Chardin, ovvero la monografia *Pierre Teilhard de Chardin: Geobiologia/Geotecnica/Neo-cristianesimo*, di Gianfilippo Giustozzi (2016), alla quale rimandiamo per un approfondimento.

gione destinata a soppiantare i culti antichi», ma, di fronte a queste provocazioni, i cristiani non dovrebbero rispondere con la diffidenza. Il gesuita invita i propri correligionari a rigenerare la propria fede, guardando senza timori proprio a ciò che accade al di fuori dell'ovile. Ciò perché «né noi né i nostri avversari abbiamo preso in sufficiente considerazione gli sviluppi riservati dal Cristo alla sua Chiesa» (ibid.: 39).

Teilhard de Chardin si carica il fardello sulle spalle. San Tommaso d'Aquino aveva già rinnovato una volta il cristianesimo, pacificandolo e fondendolo con la scienza "pagana" di Aristotele. Ora, il gesuita si erge a nuovo Tommaso e propone una sintesi tra il culto di Cristo e le frontiere più avanzate della scienza biologica e cosmologica. Il tentativo in parte riesce e in parte fallisce. Dopo la proibizione a leggere le sue opere, arriva infatti una sua "riabilitazione", in concomitanza con il Concilio Vaticano II. Tuttavia, ancora oggi ci sono forti resistenze nei confronti dell'impianto dottrinale teilhardiano e dello stesso Concilio².

Ciò che ci interessa principalmente sottolineare in questa sede è che la ricerca di una nuova religione occupa da secoli un posto centrale nell'agenda delle élite intellettuali. Nel Novecento, l'alternativa al tentativo teilhardiano di rinnovare – o addirittura "trasfigurare" – il cristianesimo, non è tanto un materialismo ateo dagli esiti nichilistici, quanto la fondazione di un nuovo culto e di una nuova chiesa. Il padre putativo del transumanesimo, Julian Huxley, prima ancora di forgiare il nome e dunque la cosa, discute a più riprese la questione religiosa. Nella raccolta di articoli *Essays of a Biologist* (1923), lo scienziato inglese parte da due considerazioni fondamentali: 1) la religione cristiana è ormai apertamente in conflitto con le scienze naturali; e tuttavia 2) il bisogno di spiritualità è profondamente radicato nell'uomo, costituendone forse il tratto più saliente. Partendo da questi due postulati osservativi, Huxley (1923: 302) conclude che, «poiché il modo di pensare scientifico è di validità generale e non solo locale o temporaneo, costruire una religione sulla base di esso significa consentire a quella religione di acquisire una stabilità, un'universalità e un valore pratico fino ad ora non raggiunto». In altre parole, il biologo concorda con l'idea programmatica di Lord John Morley, riassunta nella seguente frase: «Il prossimo grande compito della Scienza è creare una religione per l'umanità» (Huxley 1923: 235).

Le osservazioni di Huxley sono contenute in un saggio intitolato *Religion and Science: Old Wine in New Bottles*, per dire che il vecchio vino, il sentimento religioso profondamente radicato nell'uomo, deve essere travasato nelle nuove bottiglie offerte dalla scienza. Significativamente, l'articolo che

² La ricezione delle idee del "gesuita proibito" da parte della Chiesa cattolica è un problema assai spinoso, che abbiamo affrontato nel saggio *Il fascino inquietante dell'ultraumano* (Campa 2017b) e sul quale non intendiamo qui ritornare.

fonda (almeno nominalmente) il transumanesimo compare in apertura di una nuova raccolta di saggi, pubblicata nel 1957, intitolata *New Bottles for New Wine*. Ora tutto è nuovo: le bottiglie e il vino, il contenitore e il contenuto.

In uno dei saggi ivi raccolti, leggiamo: «Come primo passo, abbiamo bisogno di una nuova scienza diretta allo studio di possibilità umane non ancora realizzate. Proseguendo, questa scienza deve essere abbinata a una religione basata sull'idea di realizzazione di possibilità. Il cristianesimo ha fatto il primo grande passo verso questo obiettivo, affermando che tutti gli uomini hanno la possibilità di salvarsi. La nostra formulazione moderna sarà che tutti gli uomini hanno la possibilità di giungere a una maggiore realizzazione» (Huxley 1957: 242). L'imperativo di trascendere se stessi, realizzando le nuove possibilità che la scienza dischiude all'uomo, viene denominata "transumanesimo" (Huxley 1957: 17).

4. IL PARADIGMA CIBERNETICO

Le riflessioni di Teilhard de Chardin e Huxley, anche se non trascurano l'impatto sociale delle nuove tecnologie, sono principalmente incentrate sull'evoluzione biologica della specie umana, in una prospettiva eugenetica. Gli sviluppi dell'informatica, della cibernetica e della robotica, nella seconda metà del Novecento, aprono invece le porte alla nuova concezione della singolarità tecnologica. Il primo uso del concetto, in stretta relazione alle nuove tecnologie computazionali, va ascritto al matematico, fisico, informatico ungherese John von Neumann, inventore della moderna teoria dei giochi, insieme a Oskar Morgenstern (Campa 2014).

Negli anni cinquanta, nel corso di una conversazione, von Neumann afferma che «il progresso sempre più accelerato della tecnologia e i mutamenti dei modi della vita umana danno l'impressione di un avvicinamento ad una singolarità essenziale nella storia della razza oltre la quale gli affari umani, come oggi li conosciamo, non potranno continuare» (Ulam 1958). Nota Raymond Kurzweil (2005), uno dei principali teorici della singolarità, che von Neumann coglie con grande anticipo due aspetti essenziali dello sviluppo tecnologico. Il primo è che il progresso segue una curva esponenziale e non lineare, ovvero cresce accelerando. In altri termini, la potenza di calcolo delle macchine si espande moltiplicandosi ripetutamente per una costante e non sommando una costante. La seconda è che la curva dello sviluppo conduce a un punto di non ritorno, a una situazione qualitativamente diversa da quella in cui ci troviamo, che lo stesso von Neumann chiama "singolarità". Va precisato che il matematico ungherese non era convinto che il futuro dell'umanità fosse di necessità legato alla scienza. Queste le sue parole: «Gli interessi dell'umanità possono cambiare, le curiosità presenti nella scienza

possono cessare, e cose completamente diverse possono occupare la mente umana in futuro» (Ulam 1958).

Quella di von Neumann non è, dunque, una concezione positivista dello sviluppo. Ai suoi occhi, il progresso scientifico non appare come un processo ineluttabile. Il motivo per cui egli prende in considerazione anche l'eventualità di una scomparsa della scienza è la sua grande conoscenza della storia umana, inusuale per un matematico. In particolare, ci segnala Ulam (1958) che lo studioso ungherese era in grado di riportare a memoria tutti gli aneddoti della poderosa opera *The History of the Decline and Fall of the Roman Empire* di Edward Gibbon, che mostrava come l'Impero Romano fosse crollato a causa dell'azione corrosiva del cristianesimo. Se è già successo una volta che una civiltà avanzata sul piano dei costumi e delle conoscenze ingegneristiche è regredita, può succedere ancora (Russo 2006; Campa 2013).

Ma è possibile un avvento della singolarità tecnologica, anche qualora gli esseri umani dovessero perdere l'interesse per la scienza? Sì, è possibile, se si prende in considerazione l'ipotesi che le macchine prenderanno in mano il proprio destino, riproducendosi autonomamente. "Automazione ricorsiva" è il termine utilizzato dal sociologo Luciano Gallino (2007) per indicare la costruzione di macchine da parte di altre macchine, che – si badi – è un processo già in atto, sebbene ancora non autonomo. La questione di quale tipo di organizzazione logica necessiti una macchina per essere in grado di riprodurre se stessa è stata affrontata, nell'immediato dopoguerra, proprio da von Neumann, in una serie di lavori editi e inediti che, nel 1966, sono stati riuniti nel volume *Theory of Self-Reproducing Automata*. Nel tentativo di elaborare una teoria generale degli automi, il poliedrico studioso ungherese prende in esame e mette a confronto gli *automata naturali* (gli organismi viventi) e gli *automata artificiali* (i computer).

5. IL PARADIGMA INFORMatico

Negli anni Sessanta, è Irving John Good, un matematico che ha legato il proprio nome al calcolo delle probabilità, a prospettare un futuro in cui l'intelligenza "esplode" come conseguenza dell'automazione ricorsiva. In un articolo, pubblicato nel 1965 sulla rivista *New Scientist* e intitolato *Logic of Man and Machine*, Good produce una confutazione dell'opinione comune che una macchina non potrà mai diventare intelligente come un essere umano. Il matematico britannico parte dalla definizione di "finite automaton", rilevando che questo tipo di macchina ha: 1) un numero finito di possibili stati interni; 2) un numero finito di possibili *input* in ogni momento; 3) un numero finito di possibili *output* in ogni momento; 4) la proprietà che lo sta-

to successivo è determinato unicamente dallo stato presente e dall'*input* presente; 5) la proprietà che l'*output* successivo è anche determinato unicamente dallo stato presente e dall'*input* presente. Good spiega che un esempio di automa finito è il computer digitale. Quindi, prende in considerazione il concetto di "Turing Machine", elaborato da Alan Turing nel celebre articolo *On Computable Numbers, with an Application to the Entscheidungsproblem*, scritto nel 1936 e dato alle stampe nel gennaio dell'anno successivo. Nella sua definizione, condizionata dallo stato di avanzamento della tecnologia del tempo, una macchina di Turing è un automa finito combinato con un nastro infinitamente lungo. Se si ammette la possibilità di computazione di un numero infinito di *input* da parte di un automa che ha comunque limiti computazionali, si apre la possibilità di considerare l'uomo alla stregua di una macchina di Turing. Poiché gli esseri umani hanno un'intelligenza e una memoria limitata, segue logicamente che può essere costruita una macchina in grado di eguagliare o addirittura superare la capacità di un umano. Good precisa che valuta la questione sotto il profilo del pensiero razionale, mentre non considera la questione metafisica del "dolore" che una tale macchina potrebbe o non potrebbe provare. Aggiunge anche, per rispondere a coloro che chiama "mentalisti", che c'è comunque una differenza sostanziale tra l'uomo e la macchina di Turing: il primo è un essere mortale, con una capacità percettiva limitata, e quindi non è davvero in grado di analizzare un numero infinito di *input*. Ma questo significa soltanto che l'essere umano è *meno*, e non *più*, di una macchina di Turing.

In un secondo articolo, pubblicato nel 1966 e intitolato *Speculations Concerning the First Ultra-Intelligent Machine*, Good prevede che, quando appariranno le prime macchine davvero intelligenti, esse saranno in grado di progettare e costruire altre macchine intelligenti, senza l'intervento umano, e si apriranno scenari inediti nel campo dell'evoluzione. Queste le sue parole: «Definiamo una macchina ultra-intelligente come una macchina che può superare di gran lunga tutte le attività intellettuali di qualsiasi uomo, per quanto intelligente. Poiché la progettazione di macchine è una di queste attività intellettuali, una macchina ultra-intelligente potrebbe progettare macchine ancora migliori; ci sarebbe quindi senza dubbio una "esplosione di intelligenza" e l'intelligenza dell'uomo rimarrebbe molto indietro. Quindi la prima macchina ultra-intelligente è l'ultima invenzione che l'uomo avrà bisogno di fare, a condizione che la macchina sia abbastanza docile da dirci come tenerla sotto controllo» (Good 1966).

Il matematico oxoniense va comunque messo nel novero dei pensatori tecno-ottimisti. In un mondo sull'orlo dell'autodistruzione, a causa di una guerra fredda che minaccia di tramutarsi in olocausto nucleare in ogni istante, è fermamente convinto che la stessa sopravvivenza dell'uomo dipenda in ultima istanza dalla costruzione di una macchina ultra-intelligente in grado

di risolvere i problemi dell'umanità.

Se il concetto di singolarità è già presente negli scritti di von Neumann e Good, il più preciso termine "singolarità tecnologica" lo dobbiamo a Vernor Vinge, scrittore di fantascienza, nonché matematico e informatico alla San Diego State University. Nel 1983, in un articolo apparso sulla rivista *Omni*, Vinge annuncia l'evento come imminente: «Presto creeremo intelligenze più grandi delle nostre. Quando ciò accadrà, la storia umana avrà raggiunto una sorta di singolarità, una transizione intellettuale impenetrabile come lo spazio-tempo annodato al centro di un buco nero, e il mondo andrà ben oltre la nostra comprensione. Questa singolarità, credo, tormenta già un certo numero di scrittori di fantascienza. Essa rende impossibile un'estrapolazione realistica a riguardo di un futuro interstellare. Per scrivere una storia ambientata un secolo nel futuro, è necessario un conflitto nucleare nel frattempo... affinché il mondo rimanga intelligibile» (Vinge 1983: 10).

Vinge lega strettamente il concetto di singolarità allo sviluppo dell'intelligenza artificiale e fa riferimento alla metafora astronomica, più che all'accezione biologica del termine, anche se la questione riguarda in qualche modo anche l'evoluzione della specie. Come si può notare, in questo primo scritto, lo studioso denomina l'evento "una sorta di singolarità" (*a kind of singularity*), lasciando fuori l'aggettivo "tecnologica". La singolarità ritorna in un suo romanzo di fantascienza, *Marooned in Realtime*, dato alle stampe nel 1986 e premiato con il prestigioso Hugo Award. Tuttavia, la tappa più importante del percorso storico dell'idea di singolarità tecnologica è un simposio organizzato dalla NASA nel 1993, nel corso del quale Vinge presenta un articolo in cui l'avvento di «entità con intelligenza superiore a quella umana» è ora indicato con il termine "Technological Singularity". L'importanza dello scritto non è, però, legata solo alla completezza del termine. Fino a quel momento erano state prodotte solo frasi o brevi scritti divulgativi in cui si faceva riferimento al concetto. Il *paper* presentato da Vinge alla conferenza della NASA è il primo studio davvero sistematico della questione. Lo studioso americano deve, dunque, essere annoverato tra i principali artefici della teoria della singolarità tecnologica.

6. IL PARADIGMA ROBOTICO

In questa categoria va fatto spazio anche all'ingegnere robotico Hans Moravec, autore di libri e articoli spesso citati dai teorici del transumanesimo. Nel 1988, lo studioso pubblica *Mind Children*, nel cui prologo si dice convinto che l'orizzonte degli eventi non sarà segnato dall'olocausto nucleare. Ciò che, secondo Moravec (1988: 1), ci attende «non è l'oblio ma piuttosto un futuro che, dal nostro attuale punto di vista, è meglio descritto dalle parole

“postbiologico” o addirittura “soprannaturale”. È un mondo in cui la razza umana è stata spazzata via dall’onda del cambiamento culturale, usurpata dalla sua stessa progenie artificiale». Le conseguenze finali di questo processo sono sconosciute. Tuttavia, molti passaggi intermedi non sono solo prevedibili, sono già osservabili. Moravec precisa che, «oggi, le nostre macchine sono ancora semplici creazioni che richiedono l’attenzione dei genitori». Sono come neonati che prestano attenzione al mondo circostante, ma ancora non ne hanno piena coscienza. Anche se parliamo di “intelligenza artificiale”, i computer e i robot costruiti dall’uomo ancora non sono degni di essere definiti “intelligenti”. Ma è solo questione di tempo. Secondo l’ingegnere, «entro il prossimo secolo [i robot] matureranno in entità complesse come noi stessi e, infine, in qualcosa che trascende tutto ciò che conosciamo, qualcosa di cui potremo dirci orgogliosi, quando si riferiranno a se stessi come i nostri discendenti». In altre parole, dobbiamo imparare a vedere i robot del futuro come i nostri “eredi evolutivi”, ovvero come macchine che erediteranno le nostre capacità cognitive, condivideranno i nostri obiettivi, decideranno in base ai nostri valori. Perciò, possiamo propriamente chiamarli figli della nostra mente.

Nell’articolo *The Age of Robots*, presentato a una conferenza nel 1993 e pubblicato l’anno successivo, Moravec giunge alla conclusione che i robot acquisteranno coscienza e si espanderanno oltre la Terra, colonizzeranno l’universo, trasformeranno ulteriore materia inerte in macchine pensanti, fino a fare acquisire coscienza all’intero universo.

Di Moravec, merita una menzione anche il libro *Robot: Mere Machine to Transcendent Mind*, pubblicato nel 1999. Il testo può essere visto come il seguito di *Mind Children*. L’autore porta nuovi elementi a supporto della previsione che le macchine acquisteranno coscienza. Prevede che esse raggiungeranno livelli umani di intelligenza entro il 2040 e che entro il 2050 ci supereranno. La sua, però, è tutt’altro che una visione desolante. Al contrario dei luddisti intellettuali, Moravec dà il proprio benvenuto a un futuro in cui saranno le macchine e non gli esseri umani a dominare il mondo. Dal momento che i robot intelligenti sono i nostri figli, noi saremo ben felici nel vederli superare da loro. Ma, in un certo senso, noi saremo loro, perché non pochi umani, guidati da un desiderio di immortalità, quando la tecnologia lo renderà possibile, decideranno di lasciare i propri corpi mortali e caricare le proprie coscienze in computer avanzati. Non sarà, dunque, più possibile tracciare una linea divisoria, sul piano ontologico, tra “ex umani” e “macchine coscienti”.

L’aspetto interessante di queste speculazioni, sotto il profilo teorico, è che Moravec prende a riferimento lo sviluppo del paradigma robotico, visto in certa misura come indipendente da quello della cibernetica e dell’intelligenza artificiale.

6. IL PARADIGMA IBRIDO

Nell'immaginario popolare, il concetto di singolarità tecnologica è comunque legato alla figura dell'imprenditore e futurologo americano Raymond Kurzweil. Sebbene non sia stato da questi coniato, è innegabile che Kurzweil sia l'uomo che lo ha reso popolare, attraverso la pubblicazione, nel 2005, del libro *The Singularity is near*. Il libro è rapidamente diventato un *best seller*, è stato tradotto in molte lingue (incluso l'italiano), e ha ispirato anche film di fantascienza, videogiochi e documentari.

Nel libro, l'autore non manca di riconoscere il proprio debito intellettuale nei confronti degli studiosi che lo hanno preceduto nella teorizzazione della singolarità tecnologica. Oltre a citare alcuni dei lavori che abbiamo appena discusso, Kurzweil parla di due libri, entrambi intitolati *The Spike*, apparsi nel 1997 e nel 2001, a firma dello studioso australiano Damien Broderick, che analizzano «l'impatto pervasivo della fase estrema dell'accelerazione tecnologica prevista entro alcuni decenni». Inoltre, il futurista americano menziona la vasta serie di scritti di John Smart, che descrivono la singolarità «come il risultato inevitabile di quella che chiama compressione "MEST" (materia, energia, spazio e tempo)». Quindi ricorda i suoi stessi contributi antecedenti alla fortunata pubblicazione del 2005. In particolare, cita il libro *The Age of Intelligent Machines*, del 1990, in cui presenta un futuro popolato da macchine dotate di intelligenza superiore a quella umana. Un futuro dietro l'angolo, locato nella prima metà del XXI secolo. Quindi, racconta che il suo libro del 1999, *The Age of Spiritual Machines: When Computers Exceed Human Intelligence*, «descrive la connessione sempre più intima tra la nostra intelligenza biologica e l'intelligenza artificiale che stiamo creando». L'accento è dunque sull'aspetto ibrido del postumano che farà seguito all'umano.

Arriviamo, così, alla definizione di singolarità proposta dallo stesso Kurzweil. Secondo lo studioso americano, è «un periodo futuro durante il quale il ritmo del cambiamento tecnologico sarà così rapido, il suo impatto così profondo, che la vita umana sarà trasformata in modo irreversibile. Pur essendo né utopica né distopica, questa epoca trasformerà i concetti cui facciamo riferimento per dare significato alle nostre vite, dai nostri modelli di business al ciclo della vita umana, inclusa la morte stessa» (Kurzweil 2005).

Sebbene possa sembrare che l'accento sulla tecnologia abbia decisamente spostato la questione sul versante secolare, in realtà anche il contributo di Kurzweil si sviluppa nel solco del dibattito nato per dare all'umanità una nuova religione. Nel libro *The Singularity is Near*, compare infatti un dialogo tra l'autore e Bill Gates che mostra come il connotato religioso della singolarità sia tutt'altro che accidentale. Commentando le speculazioni futurologiche di Kurzweil, Gates dice: «Sono d'accordo con te al novanta-

nove percento. Quello che mi piace delle tue idee è che sono basate sulla scienza, ma il tuo ottimismo è quasi una fede religiosa. Sono anch'io ottimista». Kurzweil risponde così: «Sì, beh, abbiamo bisogno di una nuova religione. Un ruolo principale della religione è stato quello di razionalizzare la morte, poiché fino a poco tempo fa c'era poco altro che potessimo fare a riguardo». Al che, il fondatore di *Microsoft* chiede quali sarebbero i principi della nuova religione. Il futurologo chiarisce che si dovranno mantenere fermi due principi: uno radicato nella religione tradizionale e uno proveniente dalle arti e dalle scienze laiche. La nuova religione terrà fermo il rispetto per la coscienza umana che già si trova nelle religioni tradizionali, ovvero l'idea che è immorale infliggere sofferenza a entità coscienti, e nel contempo acquisirà senza riserve il rispetto per la conoscenza artistica e scientifica che si trova nel pensiero laico o secolare.

Bill Gates annuisce e aggiunge che la nuova religione dovrà prendere le distanze dalle strane e intricate storie che caratterizzano le religioni ereditate dal passato, per concentrarsi su alcuni semplici messaggi. I due dialoganti dissentono però sulla necessità di un leader carismatico per diffondere il nuovo credo tra gli uomini. Un nuovo profeta, o un messia, sarebbe necessario secondo Gates, mentre farebbe parte del vecchio modello religioso secondo Kurzweil. Dopo una prima fase di dissenso, i due convergono sull'idea che un supercomputer o un sistema operativo avanzato possono svolgere egregiamente la funzione di leader carismatico.

La discussione si sposta quindi sulla dimensione teologica. Gates domanda: «C'è un Dio in questa religione?». Kurzweil risponde: «Non ancora, ma ci sarà. Quando avremo saturato la materia e l'energia dell'universo con l'intelligenza, si "sveglierà", sarà cosciente e sublimemente intelligente. Un universo cosciente è l'immagine più vicina a Dio che io possa immaginare».

La religione della singolarità è dunque basata sull'idea che la creazione sia ancora in corso e che riguardi Dio stesso, un'entità di cui tutti saremmo parte. Dio chiede agli uomini di dargli un corpo, di farlo entrare nella materia. Le coscienze umane che si sono svegliate nel mondo materiale, nel corso dell'evoluzione cosmica, sono in realtà i primi avamposti della divinità. Questo è un tema che troviamo già nel pensiero di Pierre Teilhard de Chardin e di Julian Huxley.

La singolarità tecnologica rappresenta dunque l'avvento, la parusia, la rendenzione. Che altro è un'intelligenza che tende all'infinito se non Dio stesso? Abbiamo visto che, quando si chiede al teorico della singolarità se Dio esiste, la risposta non è semplicemente un «sì» o un «no». La risposta è: «Non ancora». Kurzweil è dunque ateo e credente allo stesso tempo. È ateo dal punto di vista delle tre grandi religioni monoteistiche tradizionali, per le quali la divinità è un *Deus revelatus*. È invece credente, se si assume, alla maniera di certo paganesimo platonizzante, di certo gnosticismo, o della teo-

logia cristiana più raffinata, che la divinità sia un *Deus absconditus*. Per Kurzweil, Dio esiste in potenza, a livello ideale, nelle nostre menti e nelle possibilità fisiche dell'universo, ma non si è ancora manifestato in tutta la sua grandezza. La redenzione, la salvezza dell'uomo, il compimento della storia, non verrebbero quindi dalla grazia di un Dio personale che ha stretto un'alleanza con un popolo o si è sacrificato sulla croce, ma dall'*imitatio Dei*. Se fede c'è, essa è nella potenza delle idee, ovvero nella capacità dell'uomo di trasformare le idee in fatti.

Kurzweil svela che questa sua visione del mondo è radicata nell'educazione che ha ricevuto da bambino e che ha preso corpo in seno alla Chiesa Unitariana. Alla domanda: «Chi sono io? Che cosa sono io?», risponde – tra le altre cose – «YRUU», un acronimo che sta per “Young Religious Unitarian Universalist”. L'unitarianismo, pur essendo un movimento religioso nato in Europa circa mezzo millennio fa, ha avuto maggiore fortuna oltreoceano. Giova allora ricordare brevemente ai lettori i cardini di questa dottrina. A fondare l'unitarianismo furono perlopiù esuli italiani a Cracovia, riparati nella capitale del Regno di Polonia all'epoca della Riforma, per sfuggire alla Santa Inquisizione. In particolare, contribuì all'espansione del movimento l'opera di Fausto Sozzini, detto Socinus, tanto che i primi unitariani sono detti anche sociniani (Szczeniowski 2005). L'unitarianismo è un credo antitrinitario che, pur essendosi sviluppato nell'alveo del cristianesimo, rifiuta tutti i dogmi cristiani non confermati dalla ragione. Tra le altre cose, i sociniani non credevano nella divinità di Cristo, nella funzione redentrice del suo sacrificio sulla croce, nell'infallibilità delle Scritture, nell'inferno, nel peccato originale, nella predestinazione e nel parto verginale di Maria. Il socinianesimo era, in altre parole, un'eresia assimilabile per certi aspetti all'arianesimo dell'antichità e, per altri, al deismo dell'era moderna.

Conseguenza diretta dell'approccio razionalistico dell'unitarianismo è la tolleranza religiosa, ovvero l'idea che in tutte le religioni c'è un grano di verità nascosto tra molti dogmi contorti e di dubbia utilità. Per tale ragione, gli unitariani partecipano alle attività liturgiche delle altre chiese, alla ricerca di ciò che unisce. Kurzweil racconta così la sua esperienza giovanile: «Trascorrevamo sei mesi a studiare una religione – andavamo alle sue liturgie, leggevamo i suoi libri, avevamo dialoghi con i suoi leader – per poi passare alla successiva. Il tema era: «Sono molte le vie alla verità». Ho notato, naturalmente, molti paralleli tra le tradizioni religiose del mondo, ma anche le incongruenze erano illuminanti. Mi è apparso chiaro che le verità fondamentali erano abbastanza profonde da trascendere apparenti contraddizioni».

Per farla breve, se Cristo dice «Io sono la via, la verità, la vita» (Gv 14:6), gli unitariani non contestano questo assunto, si limitano a togliere l'articolo determinativo. Le vie del Signore sono molte, forse infinite. Per Kurzweil, una via privilegiata alla verità e alla vita è la tecnologia scientifica.

7. LA CHIUSURA DEL CERCHIO

L'esigenza di fondare una nuova religione universale, capace di conciliare la tensione all'infinito inscritta nell'uomo con la visione scientifica del mondo, si manifesta in diverse iniziative nell'ambito del movimento transumanista. Una delle più rimarcabili è la recente fondazione della Chiesa di Turing (*Turing Church*), che conta già un migliaio di aderenti. Uno dei suoi membri di spicco, Giulio Prisco, fisico teorico per formazione e transumanista della prima ora per vocazione, ha recentemente scritto un libro di riferimento, *Tales of the Turing Church*, la cui versione preliminare è accessibile in rete. Significativo è il tentativo di superare la religiosità del passato, mantenendo però con essa una sorta di continuità. Questo l'incipit dell'opera: «Questa non è la religione di tuo nonno. La scienza e la tecnologia del futuro permetteranno di giocare con gli elementi costitutivi dello spaziotempo, della materia, dell'energia e della vita in modi che oggi possiamo solo chiamare magici e soprannaturali. Un giorno o l'altro in futuro, tu e i tuoi cari sarete risuscitati da una scienza e una tecnologia molto avanzate. Intelligenze inconcepibilmente avanzate sono là fuori tra le stelle. Esseri ancora più simili a Dio operano nel tessuto della realtà al di sotto dello spaziotempo, o al di là dello spaziotempo, e controllano l'universo. La scienza futura ci permetterà di trovarli e diventare come loro».

La credenza alla base della “dottrina” della Chiesa di Turing è che «i nostri discendenti nel lontano futuro si uniranno alla comunità di esseri simili a Dio tra le stelle e oltre, e useranno la tecnologia trascendente per resuscitare i morti e rifare l'universo». Questa visione può risultare spiazzante, visionaria, persino folle, per chi non ha seguito lo sviluppo del pensiero transumanista, partendo da Teilhard de Chardin e Huxley, per arrivare a Kurzweil, passando attraverso von Neumann, Gold, Vinge e Moravec. Di questo, i fondatori della Turing Church sono perfettamente coscienti. Prisco mostra questa consapevolezza rimarcando, retoricamente: «Scienza? Spaziotempo? Alieni? Tecnologia del futuro? Ti avevo avvertito, questa non è la religione di tua nonna». Eppure, relazioni con le religioni del passato non mancano. E, dopo aver creato un senso di estraniamento, l'autore sottolinea la continuità sottotraccia con la tradizione: «Semplifica ciò che ho detto e riformulalo come: Dio esiste, controlla la realtà, resusciterà i morti e rifarà l'universo. Suona familiare? Scommetto di sì. Quindi forse questa è la religione dei nostri nonni, in parole diverse».

In conclusione, abbiamo adottato la prospettiva della *storia delle idee*, per mostrare che da alcuni secoli è in atto un tentativo di fondare una nuova religione universale, “al passo coi tempi”. Detto tra parentesi, la storia delle idee è una disciplina nata per attraversare tutte le discipline, tutti i paradigmi, proprio come l'unitarianismo è una religione nata per attraversare tutte le re-

ligioni. E non è forse un caso che la storia delle idee sia stata fondata da un altro illustre membro della Chiesa unitariana: Arthur Lovejoy.

La fede nella singolarità tecnologica è forse il tentativo più ardito e spregiudicato per chiudere il cerchio. C'è, da un lato, la convinzione che il cristianesimo abbia svolto una funzione importante in passato e, dall'altro, la consapevolezza che il mondo contemporaneo si estende ben oltre l'Occidente e le sue ex colonie cristianizzate. Quella che è stata per secoli un'idea unificante, almeno in linea di principio e al netto delle persecuzioni e delle guerre religiose, che pure non sono mancate, è diventata un fattore concreto di divisione. Il termine "cattolica" significa "universale", ma è oggi impensabile pensare alla conversione al cristianesimo dell'intera umanità. Miliardi di esseri umani, cresciuti nel mondo islamico, in India, in Cina, o in Giappone, fanno riferimento a orizzonti religiosi e culturali diversi. Eppure, tutti parlano il linguaggio della scienza e usano le stesse tecnologie. Da questa base, i transumanisti singolaritariani vogliono partire per edificare una spiritualità comune e finalmente unificante. La convinzione profonda è che i popoli della Terra possono tutti comprendere e abbracciare l'idea di singolarità. Se non lo faranno, sarà comunque la Singolarità ad abbracciare loro.

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O MOŻLIWOŚCIACH IDENTYFIKACJI NURTÓW PEDAGOGICZNYCH W OBRĘBIE IDEALIZMU

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ABSTRACT

The question of philosophical background for educational currents is still vivid in education studies. Idealism used to be one of the most influential for education, especially since the Enlightenment period. This article aims at outlining basic criteria for the identification of educational ideas and currents in the scope of idealism. The main focus is put on principal elements of education: its subjects, forms relationships, curricula, didactics, fundamental ideas, values, and main objectives. By outlining their characteristics in the context of idealism, this article also proposes a prospect for developing further methodology in this subject matter.

Punktem wyjścia dla wskazania możliwości identyfikacji nurtów pedagogicznych w obrębie idealizmu jest związek filozofii z pedagogiką. O ile sama edukacja może ograniczać się jedynie do poszukiwania coraz skuteczniejszych metod przyswajania wiedzy, rozwijania kompetencji czy umiejętności, tak pedagogika rozumiana jako nauka uwzględnia również pewną wizję świata, porządek normatywny (Leś, 2011, 48) stojący za tym, co ma być nauczane i przekazywane kolejnym pokoleniom. Sławomir Sztobryn wskazuje także na bogate tradycje tzw. pedagogiki filozoficznej (Sztobryn, 2016). Mimo, iż filozofie w rozumieniu systemów momentami znacznie od siebie się różniły, powyższy związek między tymi dyscyplinami zdaje się być niezaprzeczalny. Co więcej, refleksja o charakterze filozoficznym winna uwzględniać konsekwencje praktyczne (pedagogiczne), a ta *stricte* pedagogiczna nie może zapominać o fundamentalnych podstawach teoretycznych (filozoficznych).

Pośród wielu ról, jakie filozofia pełni w refleksji pedagogicznej, Sztobryn wyróżnia siedem zasadniczych elementów idealizmu, istotnych dla poniższych rozważań: idealizm 1) to określona koncepcja człowieka, świata i ich wzajemnych relacji; 2) „stwarza określoną koncepcję aksjologiczną będącą podstawą teleologii, [podczas gdy] epistemologia i logika służą dydaktyce, etyka teorii wychowania moralnego, estetyka teorii wychowania estetyczne-

go, filozofia prawa i państwa podbudowuje koncepcje wychowania obywatelskiego, filozofia religii jest podstawą wychowania religijnego, historia filozofii wraz z metodologią wskazują drogę historii pedagogiki, prakseologia stanowi przesłankę skutecznej metodyki”; 3) idealizm „formuluje konkretne idee, które pedagogika z różnym stopniem krytycyzmu podejmuje”; 4) „jest źródłem metodologii”; 5) „bada podstawowe dychotomie, które mają swoją postać na gruncie koncepcji pedagogicznych” – na przykład aprioryzm vs. aposterioryzm; 6) idealizm przekłada się na definiowanie pojęć; 7) a przede wszystkim „filozofia może inspirować kierunek badań empirycznych” (Sztobryn, 2003, 25-39). Jest to jedna z istotniejszych propozycji zestawienia powiązań idealizmu z pedagogiką, jednak na szczególną uwagę zasługuje punkt trzeci, dotyczący idei, oraz ostatni, odnoszący się do badań empirycznych. Sposób, w jaki pedagogika może podejmować idee filozoficzne ma konsekwencje nie tylko dla samej teorii, ale właśnie praktyki procesu wychowania. W odróżnieniu od filozofii, pozostającej głównie w sferze koncepcyjnej, teoretycznej, pomimo silnego teoretycznego zaplecza, przedmiotem zainteresowania pedagogiki jest też aspekt praktyczny. Obejmuje on konkretne metody, metodyki i sposoby oddziaływań, instytucjonalizację czy mniej lub bardziej sformalizowane procedury. Za rozwiązaniami praktycznymi stoją min. określone wizje świata (*Weltanschauung*), systemy wartości, potrzeby społeczne, uwarunkowania ekonomiczne czy kontekst osiągnięć i rozwoju nauki w pozostałych dyscyplinach. W obszarze *praxis* pojawiają się konkretne *pedagogie*, w ramach których identyfikowalne są pomniejsze nurty (Jaworska-Witkowska, 2011). Dlatego tak ważne jest dokładne poznanie idei czy też wartości leżących u podstaw poszczególnych nurtów pedagogicznych, oraz filozoficznych inspiracji z jakich one wynikają, z których czerpią. Wielość definicji oraz punktów widzenia na normatywność pedagogiki, jak również różnorodność form i odmian samego idealizmu sprawia, że tym trudniej o zidentyfikowanie nurtów sięgających bezpośrednio do idealizmu. Określenie twardych kryteriów wymagałoby powtórnego zredefiniowania podstawowych pojęć, dokonania gruntownej charakterystyki fenomenów przestrzeni wychowawczej oraz zaplecza teoretycznego nurtów pedagogicznych, a przynajmniej zestawienia polisemicznych kategorii jakie tworzą w ramach pedagogii. Te potrafią się skrajnie różnić, dlatego jest to zadanie właściwie graniczące z budową kolejnego systemu myślowego. Dlatego też niniejszy tekst ogranicza się jedynie do wskazania pewnych zasadniczych tropów, na jakie być może warto zwracać uwagę, przystępując do analizy idei i nurtów pedagogicznych.

Pomijając protoplastów klasycznego idealizmu (jak np. Anaksagoras), głównym przedstawicielem tego nurtu w myśli zachodniej jest Sokrates (autor metod stosowanych w dydaktyce po dziś dzień, czyli elektrycznej i maieut-

tycznej) oraz Platon, który zakładał istnienie bytów doskonałych, bardziej pierwotnych od tych poznawalnych zmysłowo. Na przestrzeni dziejów można wymienić szereg filozofów podejmujących zagadnienie idealizmu: Plotyn, Immanuel Kant, Gottfried Wilhelm Leibniz, Georg Wilhelm Friedrich Hegel (i XIX-wieczni idealisci niemieccy), z nurtu anglosaskiego min. George Berkeley, Thomas Green, Bertrand Russell, czy Francis Bradley i wielu innych. Często idealizm rozważano w opozycji do takich nurtów, jak pragmatyzm i realizm, kontrastujących w podstawowych założeniach: ontologicznych, poznawczych czy aksjologicznych. Historycznie rzecz ujmując, można wyróżnić idealizm platoński, zakładający istnienie świata doskonałego – świata idei, oraz świata ich cieni, w którym żyje ludzkość. Ten typ odzwierciedla się również w pismach Hegla – w postaci idealizmu obiektywnego (lub inaczej – absolutnego), zakładającego istnienie idei niezależnej od podmiotu czy materii, jak również jednego rozumu (ducha), w którym dokonuje się poznanie rzeczywistości (Inwood, 2002). Dalej wyróżnia się kantowski idealizm transcendentálny odrzucający poznanie rzeczy samych w sobie, gdzie przedmioty zależne są od indywidualnego poznania. Następnie, wyróżnia się idealizm subiektywny (charakterystyczny min. dla Berkeley’a), u którego podstaw leży zaasada *esse est principii*, oznaczająca *bycie*, coś, co wyznacza percepcja. Berkeley utożsamiał bycie z percepcją, poznaniem indywidualnym (Cedeno, 2003, 87). Dla przykładu: książka nie może istnieć, jeśli nie jest odbierana zmysłowo, ale też jeśli nie istnieje w intelekcie, pod postacią idei.

Inny podział idealizmów zaproponował Józef Bocheński (Bocheński, 2008). Pierwszym, który wymienia jest idealizm moralny, jako postawa wyrażająca się wiarą w ideały moralne. Następnie wymienia on idealizm ontologiczny (typowy dla Platona), który obok przedmiotów realnych, uznaje istnienie bytów idealnych. Jako przykład daje wartości czy prawa matematyczne. Kolejny to idealizm teoriopoznawczy podmiotowy, polegający na tym, iż człowiek może poznać jedynie swoje idee, a poza umysłem czy psychiką nie ma nic innego. Jako czwarty typ, Bocheński wymienia typ transcendentálny – gdzie przedmioty poznania zależą *a priori* od tak zwanych transcendentálnych form poznania. Z punktu widzenia filozofii, najczęściej spotyka się podział idealizmu na epistemologiczny i metafizyczny. Epistemologiczny dzieli się dalej na immanentny i transcendentny, zaś metafizyczny – na subiektywny i obiektywny, przy czym dopiero subiektywny uznaje podział na immanentny i transcendentny (Ajdukiewicz, 2004).

Pomijając krytykę i obszerną debatę wokół tych idealizmów, jak również zważając na fakt, iż kolejnych rodzajów i typologii można by mnożyć w zależności od poszczególnych teoretyków, filozofów przyjmujących tę orientację poznawczą i ontologiczną (np. Wschodni i Zachodni, przyjmujący kryterium kultury, czy typologie zależne od konkretnych gałęzi filozofii), za

cechę wspólną większości można wskazać twierdzenie, iż idee i wytwory intelektu są rzeczywiste. W zależności od nurtu, zmieniają się akcenty kładzione na idee (boga, jednostki czy rzeczywistości). Przykładowo, personalizizm – w odróżnieniu od absolutu Hegla czy subiektywizmu Berkeley’ a – kładzie nacisk na pojmowanie i rolę jednostki w taki sposób, żeby nie została wchłonięta przez ideę boga (Flawelling, 1953, 100-110). Flawelling dochodzi do wniosku, że idealizm jest raczej kategorią systemów filozoficznych, obejmującą poszczególne nurty czy szkoły filozoficzne. Tym samym właściwsze byłoby odnosić nurty pedagogiczne ściśle do konkretnych szkół i nurtów filozoficznych, lub do określonych typów idealizmu.

Dynamiczny rozwój różnorodnych form idealizmu w nowożytnej odsłonie zawdzięcza się między innymi wspomnianym wcześniej: Kartezjuszowi, Berkeley’owi czy Kantowi. W momencie rozwoju niemieckiej, XIX-wiecznej wersji dość radykalizowanego idealizmu, reprezentowanego przez Johanna Gottlieba Fichtego, Friedricha Schellinga i Georga Wilhelma Hegla, istotny dla niniejszej refleksji zdaje się być fakt, iż niemal od stulecia funkcjonował wtedy obowiązek szkolny. Wdrożony przez Fryderyka I, bardzo skrupulatnie był egzekwowany na terenach ówczesnych Prus. Wtedy też, dość transparentnie ujawniała się refleksja idealistyczna w kontekście pedagogicznym. Wiek XIX odznacza się szczególną intensyfikacją wpływu idealizmu na ten obszar tak w obszarze teoretycznym, programowym, jak i w sposobach organizowania szkolnictwa. Wyrazem była wszechobecna, surowa dyscyplina i karność, egzekwowane przy równoczesnym poszanowaniu autorytetu nauczyciela. Był on figurą wysoko postawioną i znaczącą w hierarchii szkolnej XIX-wiecznego, pruskiego modelu kształcenia. Nie tylko miał nieposzlakowaną opinię, dobre imię, autorytet i posłuch wśród uczniów, kompetencje i umiejętności dydaktyczne, ale też odgrywał szczególną rolę w procesie wychowawczym dziecka, prezentując postawę do naśladowania, kształtując odpowiedni system wartości.

Ponadto, niemiecki idealizm stanowił silną inspirację dla tego, co działo się w owym czasie w szkolnictwie także poza granicami Starego Kontynentu – głównie w Stanach Zjednoczonych. Szczególnie na gruncie amerykańskim wdrażano do edukacji strategie i rozwiązania inspirowane idealizmem. Transcendentalista Amos Bronson Alcott, jako najważniejsze zadanie edukacji wskazywał kształtowanie charakteru, do realizacji czego stosował metody sokratejskie w edukacji najmłodszych. Miała temu służyć również analiza treści biblijnych oraz rozmaitych problemów społecznych, poprzez odpowiednio moderowaną dyskusję. Przy okazji, działania te miały zapoznawać dzieci i młodzież z treściami wcześniej wyselekcjonowanymi przez Alcotta, co w dużej mierze realizowane było na wzór platońskiej akademii (Ozmon / Craver, 2015).

We wstępie do jednego z pierwszych nowożytnych dzieł w całości poświęconemu procesom wychowania, tj. *O pedagogice*, Immanuel Kant zwraca uwagę na to, że tylko człowiek potrzebuje wychowania. Te zaś składa się z następujących elementów: opieka i żywienie, dyscyplina oraz nauczanie – rozumiane jako *Bildung*, czyli wraz z kształtowaniem (formowaniem) i wychowaniem moralnym (Kant, 2003, I). Definicja ta dość trafnie identyfikuje elementy składowe wychowania, o których mowa również współcześnie. Pośród wielu definicji proponowanych przez różne nurty pedagogiczne, charakteryzujące się odmiennymi założeniami i paradygmatami, zauważa się niemalże stałą obecność takich elementów, jak: *podmioty pedagogiczne*, przez które rozumie się osobę wychowanka, grupy wychowanków czy uczniów, rodziców, formalne oraz nieformalne instytucje i organizacje nie tylko w swych celach i założeniach realizujące zadania edukacyjne i wychowawcze, ale też posiadające taki potencjał (gdy efekty wychowawcze są poboczne, nie są stawiane na pierwszym miejscu), jak również dziś coraz silniej zaangażowane w kształcenie – media. Następnie wymienia się *relację*, jako spotkanie podmiotów edukacyjnych – tak istotne chociażby dla personalizmu. W dalszej kolejności mówi się o *kształceniu*, które można rozumieć zarówno poprzez przekazywanie i utrwalanie wiedzy, kształcenie u wychowanków pewnych zdolności, umiejętności, rozwijanie talentów, jak również przystosowywanie do postępowania zgodnie z określonymi wartościami porządkującymi postrzeganie i funkcjonowanie w świecie. Tym samym, by mówić o wychowaniu, w odróżnieniu od zwykłego treningu czy tresury, szczególną uwagę poświęca się wartościom, które mają być przekazywane czy „transmitowane” oraz internalizowane przez wychowanków. Zwraca się uwagę na niebagatelną rolę *uwarunkowań środowiskowych* jako przestrzeni, pewnego społeczno-kulturowego kontekstu, *milieu* w którym podmioty edukacyjne funkcjonują: poprzez interakcje, konfrontacje i szereg innych form relacji.

Poszukiwania konkretnych przykładów odniesień filozofów idealizmu do wychowania sprowadzają w pierwszej kolejności do Platona, który z edukacji uczynił jeden z kluczowych elementów budowania swojego idealnego *Państwa*. Edukacja miała za zadanie kształcić w celu poszukiwania i doprowadzania do prawdziwych idei. Idąc dalej wspomnianymi przykładami, dla Alcotta, a jeszcze wcześniej do Kanta i Johna Horne’a, edukacja miała na celu dać społeczeństwu nie tylko człowieka wykształconego, ale dobrego w sensie moralnym (*Ibid.*, 20). Istotność idei w sensie intelektualnym kieruje edukację w stronę przedmiotów wymagających myślenia abstrakcyjnego, zatem głównie ścisłych, matematycznych, humanistycznych, aniżeli z obszaru nauk naturalnych. Stąd do wymienianych elementów wychowania należałoby włączyć również charakter *treści nauczania*. Według idealizmu, uwaga człowieka nie koncentruje się na znalezieniu prawdy, ale ciągłym jej poszu-

kiwaniu – podług heglowskiej koncepcji prawdy zakładającej jej postępującą złożoność w miarę poszukiwania na drodze dialektyki. Ponadto, bardziej od wycinkowego badania rzeczywistości, ważniejsze jest spojrzenie uniwersalne, holistyczne, dotyczące kwestii i problemów ogólnych (*Ibid.*, 21). Sprowadzając to do przykładu: ważniejsze dla idealistów jest zrozumienie czym jest sprawiedliwość czy odwaga, od poznania formalnych składników sytuacji rzeczywistej, w której idee te będą się wyrażały. Stąd pośród najważniejszych zadań edukacyjnych dla idealizmu – oprócz poznania idei – jest (krytyczne i samodzielne) *myślenie*. Nie w sensie pozyskiwania informacji, a ich przetwarzania, zadawania pytań: dlaczego, w jakim celu, z jakiej przyczyny? Stąd sentencja kartezjańska *Cogito ergo sum* może wyznaczać prymarny cel dla edukacji. Przy okazji, to bodaj najjaskrawsze kryterium odróżniające nurt pedagogiczny w obrębie idealizmu od zwykłej ideologii. Pomimo subiektywizmu charakterystycznego dla idealizmu, poznanie i dążenie do prawdy odbywają się zawsze w jakimś kontekście. Mowa tu o roli „symbiotycznej” relacji jednostki z *Innymi*, tym samym ze światem. Relację czy spotkanie darzyli dużą uwagą zarówno Platon, Augustyn, jak i Hegel, który za klucz do zrozumienia siebie uważał odniesienie do totalności istnienia, do kosmosu (*Ibid.*). Echa powyższych rozważań odnajduje się także współcześnie w roli, jaką przypisuje się społeczeństwu obywatelskiemu w ramach zachodnich demokracji, jak też samorealizacji i samokształcenia w ramach takiego społeczeństwa.

Za rzeczonymi podwalinami teoretycznymi idą konkretne metody nauczania, czy też sposoby organizacji korelacji pomiędzy wymienionymi elementami procesu wychowania. Podejście holistyczne, uznające przyczynowość następujących po sobie faktów wymaga sporej wiedzy historycznej. Platońska wizja rozumienia *en toto* implikuje z kolei metodę dialektyczną (rozwinętą potem przez Hegla w formule *teza–antyteza–synteza*) i krytyczne myślenie. Stosowanie podobnych rozwiązań metodycznych szczególnie zauważalne było jeszcze w średniowieczu, uzupełniane przez augustiańską metodę poznania intuitywnego. Stąd między innymi zakony kontemplacyjne, gdzie niektóre z nich odrzucają nawet pieśni religijne jako dekoncentrujące w kontemplacji. W przypadku akademii inspiracje tego rodzaju można znaleźć w formie seminaryjnej. By ta była skuteczna, na poprzedzających etapach należy kłaść nacisk na kształtowanie takich cech charakteru, jak lojalność, wytrzymałość, dociekliwość, tolerancja czy pracowitość, które umożliwią późniejsze, bardziej wnikliwe i wymagające studia. Kształcenie charakteru odbywa się między innymi poprzez naśladowanie autorytetów oraz wzorów moralnych. Pośród metod przygotowujących uczniów i studentów do tych zadań będzie zatem analiza tekstu, metoda projektowa oraz kwerendy biblioteczne. Ponadto, dużą popularnością cieszyć się będą wykłady, wszelkiego rodzaju dyskusje, oraz uczenie się

i zapamiętywanie przez imitację. Natomiast, cel idealizmu w postaci samo-realizacji będzie miał na uwadze zdolność do samokształcenia i samodzielność w prowadzonej pracy. Do tego potrzebne jest kształcenie powszechne – realizowane przez pryzmat racjonalności, co teoretycznie ma uchronić od ideologizacji (w sensie porządkowania wartości wbrew zasadom logicznym czy racjonalnym na rzecz afektu czy zabobonu). Nacisk położony jest zatem na rozwój wewnętrzny (duchowy) jednostki, który dokonuje się w procesie transmisji wartości, dziedzictwa kulturowego oraz ich promowania, przy czym szczególnie ważne są wartości moralne – w odróżnieniu od etycznych, mają charakter ogólnoludzki, a nie jedynie kontekstualny, jak ma to miejsce w przypadku kodeksów zawodowych lekarzy, prawników i podobnych grup. W myśl pielęgnowania racjonalności, szczególnie istotne jest ćwiczenie i rozwijanie inteligencji, jak i łączenie sztuki (w sensie *Arts*) z nauką (*Science*) – zwłaszcza w *curriculumach*. Obok decydentów „systemowych”, by nie rzec politycznych, to w zależności od samych nauczycieli, którzy winni po kantowskiemu wyprowadzać z dzieciństwa ku dorosłości, czyli samodzielnego myślenia, zależy ich ostateczny kształt. Pośród przedmiotów *curriculum* stworzonego w duchu idealizmu można by wymienić kolejno filozofię z etyką, historię, wiedzę o religiach, sztukę, literaturę, języki obce, ale i sport – w myśl zasady „w zdrowym ciele zdrowy duch”. Rolą nauczyciela będzie zarówno sokratejska asysta w rozwoju ucznia, ale też stanowienie dlań moralnego modelu postępowania i partnera do rozmów maksymalnie zbliżającego relację do *equilibrium*. Przypomina to relację „mistrz—uczeń”, gdzie oprócz prostego nauczania umiejętności i przekazywania wiedzy, transmitowane są również pewne idee, wartości. W myśl idealizmu, nauczyciel postępuje według ściśle określonych zasad, natomiast będzie potrafił improwizować i dostosowywać się do nowych, niespodziewanych sytuacji. Pozostając wciąż autorytetem, może stosować szereg kar i nagród celem rozwoju wewnętrznej dyscypliny u wychowanka czy ucznia, a nie tylko zewnątrzsterownej karność. Jest to podejście nieco odmienne od chociażby orientacji naturalistycznej, gdzie uczniowi przysługuje pełna swoboda w doborze treści nauczania oraz trudno o karność czy kształtowanie dyscypliny z tak istotnym udziałem wychowawcy. Celem idealizmu we wdrażaniu dyscypliny jest przede wszystkim samorozwój i samopoznanie jednostki, co w efekcie końcowym ma skutkować świadomym, samodzielnym i racjonalnym zarządzaniem własnym dalszym rozwojem.

Tego rodzaju podejście do edukacji znajduje również krytyków, zwłaszcza wśród realistów, którzy uważają je za nieadekwatne do współczesnego, materialistycznego świata, jak również stwarzające zagrożenie w postaci relatywizacji i dogmatyzacji pewnych idei. Krytycy idealizmu w edukacji zarzucają brak rozwoju konkretnych umiejętności, a jedynie spojrzenie ogólne, nieszczegółowe, tym samym oderwane od rzeczywistości i nieprzygotowu-

jące do współczesnego, dynamicznie zmieniającego się świata. Przecenia się rolę matematyki mówiąc o przeintelektualizowaniu stosując metody pamięciowe, które w XXI wieku zresztą nie należą do najbardziej faworyzowanych. Wiele informacji jest dostępnych na wyciągnięcie ręki, tudzież kilka kliknięć klawiatury. Czy jednak ma to oznaczać postępujące zubażanie zasobów podstawowej wiedzy uczniów na rzecz wyposażania ich kolejne zestawy praktycznych umiejętności? – to już problem do rozważań w ramach innego artykułu. Niektóre popularne strategie wychowawcze, jak np. autorstwa Marii Montessori, stawiają dziecko w centrum zainteresowania i uwagi ograniczając rolę nauczyciela, co stoi w jawnej opozycji do idealizmu pedagogicznego. Jednym z rodzimych krytyków pedagogiki idealistycznej jest Mieczysław Gogacz, który nie widzi różnicy w „kierowaniu ludzi do ideałów i wzorców” a kierowaniu do „światopoglądów i ideologii”, ponieważ „nie kieruje do osób [...]. Wyznacza tylko nigdy niespełnione dążenia” (Gogacz, 1985, 85). Podobny ton przyjmuje Mikołaj Krasnodębski sprowadzający pedagogikę idealistyczną do pedagogiki kary i nagrody, a rola nauczyciela spłyconą jest do stróża prawa (Krasnodębski, 2009, 324^{sq}). Prawdopodobnie, wynika to z koncentracji na aspekcie społecznym – na spotkaniu i budowaniu relacji osobowych. Niemniej, inne aspekty idealizmu w pedagogice wymienione wyżej, zarówno u Gogacza jak i Krasnodębskiego wydają się przemilczane. Paradoksalnie, zarzuty stawiane przez Krasnodębskiego można wysunąć także wobec faworyzowanej przezeń pedagogiki realistycznej, która w praktyce stawiając min. na rozwój, wykorzystanie nowych technologii, praktyczne umiejętności i rozwiązywanie problemów, w podobnym stopniu narażona jest na występowanie instrumentalizmu, materializmu czy stosowania etyki sytuacyjnej, zastępując chociażby moralność prawami natury.

Obszernej analizy i podsumowania funkcjonujących dotychczas nurtów wychowania dokonał min. Bogusław Śliwerski (*Współczesne teorie i nurty wychowania*, 1998). Autor nie uwzględnia tam systemów para-pedagogicznych powstałych w totalitaryzmach, na przykład pedagogiki nazistowskiej, która pomimo założeń dziś nie do przyjęcia stanowiła relatywnie spójny system, którego kryteria odpowiadałyby wcześniej wymienionym składowym wychowania. Prawdopodobnie, dzięki temu możliwe było stworzenie dobrze zorganizowanego systemu edukacji i indoktrynacji w ramach *Hitlerjugend*. Pośród autorów, raczej mało znanych na gruncie polskim, tematem tym zajmowali się min. Ernst Krieck (*Völkischer Gesamtstaat und nationale Erziehung*) jako teoretyk pedagogiki nazistowskiej w latach trzydziestych, a już po wojnie, krytyczne opracowania znajdujemy u Hansa-Jochen Gamma (*Führung und Verführung. Pedagogik im Nazionalsozialismus*, 1964) czy Dagmar Reese w książce z 2006 roku wydanej w University of Michigan

Press – *Growing Up Female in Nazi Germany*. Również w pedagogiach totalitarnych dokonywała się transmisja specyficznych wartości. Można było mówić o szczególnej roli nauczyciela, treściach i metodach kształcenia, jak również środowiskowo uwarunkowanej relacji pomiędzy podmiotami edukacyjnymi. Co jednak odróżniało pedagogie totalitarne, to przyjęcie za nadrzędne idei, założeń i przekonań o charakterze ideowym, politycznym, nie zaś naukowym. Czy jednak współcześnie również nie dokonuje się pewnych założeń: w religii w postaci dogmatów, w nauce w postaci paradygmatów, a w polityce założeń o rozmaitym podłożu aksjologicznym? Dopiero zestawwszy ze sobą skrajne nurty, prądy, koncepcje i pedagogie, na zasadzie negacji łatwiejsze może się okazać wskazanie, które z nich *nie* spełniają kryteriów idealizmu. Należy przy tym nadmienić, iż obecnie, min. akademikom amerykańskim i niemieckim trudno stosować termin pedagogika czy *Pädagogik*, która często jest kojarzona z okresem panowania i semantycznego zawłaszczenia przez Trzecią Rzeszę, podobnie jak ta uczyniła to z hinduistycznym symbolem szczęścia. Stąd też wachlarz koncepcji wychowania trzeba rozszerzyć o tradycje anglosaskie i francuskie związane z pojęciem *Education*.

Akceptacja jednej doktryny lub ideologii, jak miało to miejsce w ustrojach totalitarnych, byłaby w tym przypadku wskaźnikiem niespełnienia założeń idealizmu. Z przykładów mniej radykalnych, pedagogika psychobiologiczna Herberta Spencera mogłaby się kłócić w pewnych założeniach z idealizmem, z uwagi na naturalistyczne i pragmatyczne podejście do świata. Nie dotyczy to już treści dotyczących samorozwoju wychowanka, ponieważ w tym zakresie występuje względna zgodność, co dodatkowo utrudnia jednoznaczną ocenę danego nurtu. Należy przy tym pamiętać, iż pedagogika ze względu na mnogość nurtów i kierunków jest poliwalentna, stąd poza ogólnym charakterem idealizmu *per se*, na przeszkodzie stoi wielokierunkowość i przenikanie się różnych myśli w pedagogice, uniemożliwiających sądy kategoryczne.

Podsumowując powyższe, wyróżniki jakie można by wymienić w pierwszej kolejności powinny być raczej orientacyjne. Właściwie byłyby wskazówkami, punktami zwrotnymi, aniżeli strukturami kategoryzującymi. Pośród nich znalazłyby się takie, jak: 1) rola wychowawcy / nauczyciela: wspomagający i wydobywający potencjał z człowieka czy nauczający jedynie sprawności? W tym przypadku trudniejsze wydaje się wydobywanie potencjałów, ponieważ wiąże się z uprzednią koniecznością ich identyfikacji, czyli poznania ucznia – nie tylko w zakresie jego umiejętności (lub ich braku), ale też często pozaprzekmiotowych atrybutów. Co za tym idzie, to 2) specyfika relacji uczeń-nauczyciel / wychowawca-wychowanek; czy nauczyciel to autorytet czy partner? Ktoś wymagający i będący wzorem postępowania moralnego dla młodego człowieka czy może specjalista i technik

niezaangażowany moralnie? W świetle zjawiska erozji autorytetu, kiedy uczniowie czy studenci coraz częściej podpisują umowy przypominające umowy handlowe na świadczenie pewnych usług lub produktów, salomowe rozwiązanie zdaje się leżeć gdzieś pośrodku tej skali. Oczywiście ważne są umiejętności i kształcenie kompetencji odpowiadających najnowszym wymaganiom współczesności, ale proces ten jest zdecydowanie łatwiejszy przy wzajemnym poszanowaniu... i pewnej dyscyplinie. Następnie pojawiają się 3) treści nauczania: czy koncentrują się wokół zagadnień humanistycznych, społecznych, artystycznych, kulturowych, czy może wokół zagadnień technicznych, praktycznych, fizycznych i biologicznych? I to pytanie nie powinno pozostawać rozstrzygające – np. biolog replikujący ludzki genom powinien znać chociażby podstawowe kwestie etyczne związane z potencjalnym klonowaniem człowieka, a dalej implikacje biologiczne, psychiczne i społeczne. Za treściami nauczania stoją 4) wcześniej zarysowane metody dydaktyczne. Następny wyróżnik to 5) obecność i transmisja w powyższych treściach określonych idei, wartości i wychowanie do nich w duchu rywalizacji (przy poszanowaniu pluralizmu i tolerancji względem innych sposobów postrzegania świata), czy raczej wychowanie do relacji, komunikacji, współżycia społecznego bez rywalizacji? Pojawia się pytanie o 6) cel wychowania i kształcenia. Każda pedagogia definiuje je na swój sposób i nie jest to miejsce by je wszystkie przytaczać, natomiast możliwe wydaje się nakreślenie pewnego spektrum: czy będzie to krytyczne i racjonalne myślenie zwieńczone zdolnością do samorealizacji i dokonywaniem postępów w indywidualnym rozwoju (jak również formowanie charakteru i kręgosłupa moralnego na podstawie naśladowania bohaterów i autorytetów), czy też pozostawanie w „życziwych nacechowanych otwartością i ufnych odniesieniach do osób”, mądrości i miłości (*Ibid.* 326) – oparte nie na indywidualności, a kolektywie, nie na rygorze, a swobodzie i samoradnym rozwoju. Konsekwentnie należałoby rozstrzygnąć: a) czy uwzględniona jest rola uwarunkowań środowiskowych – czy dany prąd pedagogiczny uwzględnia odniesienie do szerszego kontekstu? (np. globalnego) oraz b) czy wśród samych założeń procesu wychowawczego uwzględnia się samorealizację, samokształcenie, samowychowanie? Znane są bowiem systemy oparte ściśle na kolektywnym wychowaniu, zwłaszcza w obszarze pedagogiki specjalnej – resocjalizacji. Wreszcie najbardziej oczywiste, czyli 7) jakie są deklarowane *versus* rzeczywiste korzenie filozoficzne badanych nurtów pedagogicznych?

KONKLUZJE

Wyżej wymienione elementy mogą stanowić jedynie przyczynek do dal-

szych badań w tym kierunku, niemniej chociażby przez wzgląd na odrzucenie przez wielu idealistów dualizmu, w kontekście wychowania problematyczne może być skontrastowanie idealizmu z naturalizmem, realizmem, egzystencjalizmem czy pragmatyzmem. Niechęć do dualistycznego rozumowania może utrudniać jednoznaczne rozróżnienia, przez co niemożliwe stają się dychotomie: idealizm = nauczyciel wspomagający, mistrz, partner do rozmów, przewodnik duchowy; realizm = nauczyciel uczący konkretnej umiejętności, niezaangażowany moralnie, funkcjonariusz państwa; czy też treści nauczania – w idealizmie nauki humanistyczne i formalne, w realizmie zaś przyrodnicze. Bezpośrednio przekłada się to na odniesienia do idealizmu nurtów pedagogicznych. Problemem mogą się okazać również odmienne znaczenia terminów: edukacja, wychowanie, kształcenie, samorealizacja, zwłaszcza w odmiennych kręgach kulturowych i językowych. Kolejno, dla głębszej analizy należałoby przytoczyć definicje wychowania dla poszczególnych orientacji filozoficznych, określić kryteria klasyfikacji poszczególnych pedagogii jako nurtów, by dopiero potem weryfikować je na podstawie wskaźników wyodrębnionych z całej gamy rodzajów idealizmu. Można również ten problem postawić nieco inaczej: na jakim poziomie pedagogiki możliwe jest wskazanie elementów wynikających z idealizmu, lub zbadać dzieła poszczególnych filozofów z obrębu idealizmu pod kątem odniesień do wychowania i edukacji, zwłaszcza w wymiarze praktyki wychowania. Tego rodzaju analiza szczegółowa wybranych dzieł filozofów i pedagogów mogłaby stanowić intermedium obszerniejszej metaanalizy umożliwiającej bardziej kompleksowe klasyfikacje. Na co natomiast warto z pewnością zwrócić uwagę, to występowanie określonego zespołu idei, wartości, a co za tym idzie – koncepcji człowieka, wizji świata oraz finalnego efektu procesu kształcenia i wychowania. Nie bez znaczenia pozostaje też specyficzna relacja podmiotów uczestniczących w tym procesie, występowanie dyscypliny, karności, określone wyżej treści i przedmioty zawarte w curriculach, nacisk kładziony na racjonalność i rolę kształtowania intelektu (zwłaszcza zdolności rozumowania), a także złożone, wieloaspektowe, holistyczne spojrzenie na proces wyprowadzania dziecka ku dorosłości.

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